

RESEARCH REPORT

CLIENTS FEEDBACK SCORES





Research Report

Client Feedback Scores

Telemedicine for Abortion Self-Care in Southern Thailand Project

Ву

Saneekan Rosamontri Chanisiree Pumthong

Research and Program Development Division

The Planned Parenthood Association of Thailand
Under the Patronage of Her Royal Highness the Princess Mother (PPAT)

February 2023

Acknowledgments

The report authors are honored and grateful to the Global Care Project and IPPF for

funding this Customer Feedback Score research under the Telemedicine for Abortion Self-Care

in Southern Thailand Project.

The authors express their humble thanks to the staff of the Planned Parenthood

Association of Thailand (PPAT) and its Southern Regional Office for facilitating this research,

led by Dr. Aiyakan Aiyakan and his team. We would like to thank Ms. Warunee Tangsiri for

providing valuable information on relevant networks in Thailand.

In addition, the authors received excellent cooperation from staff involved in the

Telemedicine for Abortion Self-Care in Southern Thailand Project who provided most useful

information in the preparation of this report, as well as the cooperation of all participants who

took time to participate in answering the questionnaires and interviews and who provided

valuable information as part of this research project.

Research Team

February 2023

Executive Summary

Telemedicine for Abortion Self-Care in Thailand Project

This report presents results of a client satisfaction survey on the use of telemedicine services for self-termination of pregnancy, managed by medical clinics of the Planned Parenthood Association of Thailand (PPAT). The study used both quantitative and qualitative methods of data collection and analysis.

The quantitative component collected data through a self-administered online questionnaire with a sample of 100 clients who used the PPAT self-termination of pregnancy by telemedicine in 2022. The sample had an average age of 28 years (range 15 - 45), most (68%) clients resided in the southern region, followed by the central region (16%), and the eastern region (8%). Most clients sourced information on the telemedicine service using an Internet search engine, followed by a minority who were referred by a friend or acquaintance. Social media platforms were also a source of information on abortion by telemedicine. The in-depth interviews with a sub-sample of clients indicate that PPAT should be more active about publicizing the telemedicine service so that any women with an unplanned pregnancy in Thailand is aware of this option. While the clients in this study cited remote distance from the abortion clinic as the main reason for choosing telemedicine, it is clear that the privacy of telemedicine is, perhaps, the most important factor, especially for single women. Also, the elimination of travel cost is an important benefit of telemedicine for those of limited means.

The vast majority of the clients were satisfied with the PPAT telemedicine service. A minority suggested that the postal delivery of the medicines could be faster, and a few felt that the service fee was unreasonable. That said, the majority of the clients in this study are "promoters" of the telemedicine for abortion service, in that, they would gladly refer other women to the service if in need.

Qualitative data were collected by in-depth interviews with five clients of the telemedicine service. Their age ranged from 22 to 28 years. These interviews confirmed the

quantitative study findings that the PPAT clinic clients were very satisfied with the telemedicine service overall. They all agreed that the process of contacting the clinic online, providing the basic information, and arranging for the medication abortion was easy and straightforward. Delivery of the medicines was timely in almost all cases, and clients felt they could contact the doctor or clinic at any time if they had concerns or questions. In this way, the online service felt more intimate and client-friendly than going to the clinic or hospital in person. Another intriguing finding from the in-depth interviews was that the women seemed to appreciate the self-administered abortion via telemedicine because it transferred control of their situation from the practitioner to the woman herself. In that way, telemedicine abortion is empowering for women with an unplanned pregnancy who want a safe and effective option to resolve the situation. This might be especially important for the younger, single women with an unplanned pregnancy.

Even though the Covid-19 pandemic has increased demand for telemedicine around the world, this study shows that, in the case of Thailand, telemedicine for abortion is an important option for women, even in the absence of the Covid travel restrictions and need for social distancing. While this study was conducted out of the southern region clinic of PPAT, clients came from all the main regions of the country. This shows that any woman in Thailand, no matter where she lives, can access medication abortion through a telemedicine service for a safe and effective resolution of an unplanned pregnancy. Indeed, only a small minority of the clients came from the city where the attending PPAT clinic was located. This may indicate that the clients feel more comfortable with a remote service out of the belief that this will increase their confidentiality.

Only recently, Thai abortion law has been liberalized to make the procedure legal up to 20 weeks gestation. Clients felt that PPAT should be more active in disseminating information about legal abortion and the option of telemedicine, in which the woman can manage the procedure safely and effectively, and in the privacy of her own home or residence.

The researchers recommend that future studies should collect more information on the socio-economic profile of clients, and conduct studies from the provider perspective as well to

provide a comprehensive view of telemedicine and how to maximize client satisfaction and favorable outcomes.

Table of Contents

Chapter	1: Introduction	1
1.1 Bac	ckground and Importance	1
1.2 Ob	jectives	2
1.3 Scc	ope of the Research	2
1.4 Exp	pected Benefit	3
1.5 Def	finition of Terms	3
Chapter	2: Review of Related Literature	5
2.1 Situ	uation of Pregnancy Termination in Thailand	5
2.2 Tel	lemedicine service	6
2.3 Coi	ncepts of Client Satisfaction	7
2.4 Rel	lated Research	8
2.4.1	Research Related to Unwanted Pregnancy	8
2.4.2	Research Related to Effectiveness and Satisfaction with Telemedicine1	0
2.5 Co	nceptual Framework1	2
Chapter	3: Methodology1	3
3.1 Res	search Design1	3
3.2 Por	pulation of Interest and Sample1	3
3.2.1	Target Population1	3
3.2.2	Calculation of the Desired Sample Size1	3
3.2.3	Sample1	4
3.3 Res	search variables1	4

3.3.1 Independent variables	14
3.3.2 Dependent variables	14
3.4 Data Collection Instruments	15
3.4.1 Quantitative	15
3.4.2 Qualitative	15
3.5 Research Hypothesis	16
3.6 Data Collection	16
3.7 Data Analysis	16
3.7.2 Qualitative	16
Chapter 4: Results	17
4.1 Findings of the Quantitative Component	17
4.2 Quantitative Component	17
4.2.2 Accessing the telemedicine service	21
4.2.3 Reason for choosing telemedicine	21
4.2.4 Satisfaction with the Telemedicine Service for Self-Abortion	22
4.2.4.1 History of Telemedicine Experience	22
4.2.4.2 Satisfaction with the Telemedicine Experience for Self-abortion	23
4.2.5 Recommendations for Improving the Telemedicine Service and Referral of	
Others	24
4.2.5.1 Referral of the Telemedicine Service to Others in Need	24
4.2.5.2 Recommendations for Improving the Telemedicine Service	26
4.3 Qualitative Component	27
4.3.1 Reason for Choosing Telemedicine to Self-terminate an Unwanted Pregnand	cy28

4.3.2 Experience in Using Telemedicine for Abortion Self-Care	32
4.3.3 Experience with the Telemedicine System and Service	35
4.3.4 Satisfaction with the Telemedicine Service Personnel	37
Chapter 5 Summary of Findings and Recommendations	39
5.1 Summary of Findings	39
5.1.1 Characteristics of the Sample	39
5.1.2 Access to the Service	39
5.1.3 Satisfaction with the Telemedicine Service	40
5.2 Discussion of Findings	41
5.3 Recommendations Based on the Research Findings	42
References	44
Appendix A: Analysis of the Quantitative Data	47
Appendix B: Data Collection Instruments	49

Chapter 1: Introduction

1.1 Background and Importance

The Planned Parenthood Association of Thailand (PPAT) is a public benefit organization which was established (Under the Patronage of Her Royal Highness the Princess Mother) in Thailand more than 50 years ago. PPAT plays an important role in family planning by preventing unplanned pregnancy, addressing unplanned pregnancy, promoting sexual rights and access to reproductive health services, providing sex education to youth to prevent STI/HIV, and implementing quality-of-life development projects. PPAT works with a network of partners from the public and private sector, international organizations, and volunteers from the community.

In this regard, PPAT manages pregnancy termination services in accordance with the requirements of the Thai Medical Council. Thai law allows termination of pregnancy under certain conditions according to Article 305 of the Criminal Code. PPAT has nine medical clinics in Thailand which provide safe, effective, and confidential pregnancy termination. Of these nine sites, two are in Bangkok (Bang Khen Medical Clinic, and Pinklao Medical Clinic); three are in the north region (Chiang Mai Medical Clinic, Chiang Rai Medical Clinic, and Lampang Medical Clinic); two are in the northeast region (Khon Kaen Medical Clinic, and Ubon Ratchathani Medical Clinic); and two are in the south region (Hat Yai Medical Clinic, and Phuket Medical Clinic).

The epidemic of Covid-19 in Thailand (as elsewhere in the world) has restricted travel and in-person services across a range of types and providers, including pregnancy termination. This can create an extreme dilemma for women with an unwanted pregnancy who are in urgent need of abortion. Some locations, e.g., Phuket Province (which is an island) closed its borders entirely to in/out travel in 2021 during periods of greatest spread and mortality from Covid-19. Other provinces imposed similar travel restrictions of greater or lesser intensity. Thus, women in need of abortion had to find a way to access a service before they reached/exceeded the allowed gestational age for legal abortion. PPAT was particularly sensitive to this problem of access to abortion during Covid restrictions and, accordingly, introduced a telemedicine service so that women with an unwanted pregnancy could

administer medication abortion themselves, under the guidance and supervision of a trained physician. This telemedicine service is based on a client-centered approach to provide women with more options and access to safe, self-termination services.

This study was designed to gain a better understanding of client satisfaction of the telemedicine service for self-termination of pregnancy. PPAT organized this service in accordance with Global Care Project which calls for a 'Human Centered Design' (HCD) to meet the needs of women, especially privacy, leading to this innovation as a tool for accessing confidential pregnancy termination services (Nuchjaree Kijwan, 2018).

The telemedicine system was endorsed by virtue of the 2020 "Announcement of the Thai Medical Council No. 54/2563 on guidelines for remote medical practice (Telemedicine) and online clinics." Telemedicine was a relatively new innovation for Thailand, and PPAT quickly adapted the guidelines for such a service as a solution to maintain access to safe termination of pregnancy during the difficult period of the Covid-19 epidemic. Since its launch in August 2022, the PPAT model has been refined to best suit the needs of its clientele. Still, it is important to tap into the perspective of clients to better understand the needs of women and the circumstances which led to the use of the telemedicine service. Clients can directly access the service provider by going to www.ppat.clinic website. After setting up telemedicine system for abortion self-care, PPAT felt that there should be a client satisfaction assessment, and this research was conducted in parallel with the implementation of the telemedicine for abortion self-care project in Southern Thailand.

1.2 Objectives

- 1. To assess client satisfaction during the pilot phase of the PPAT telemedicine service for self-termination of pregnancy.
- 2. To identify ways to improve the telemedicine service for self-termination of pregnancy.

1.3 Scope of the Research

This research was conducted to assess the satisfaction of clients of PPAT's telemedicine services for self-termination of pregnancy. The research used both quantitative and qualitative data collection methods. The quantitative component used online

questionnaires among a sample of 100 PPAT abortion clinic clients. Data were analyzed by descriptive statistics and inferential statistics. For the qualitative component, data were collected by in-depth interviews with five abortion clients who used the telemedicine service for self-termination of pregnancy. Participants in both components had used the PPAT telemedicine service during the period of August - November 2022. Data collection was conducted during November 2022 - February 2023.

1.4 Expected Benefit

- 1. This study documents the perspective of telemedicine service clients for selftermination of pregnancy so that the results can be applied to improve the quality of the service to maximize client satisfaction.
- 2. This study also benefits future research in the refinement and expansion of a telemedicine system for self-termination of pregnancy, and provides a database for future reference.

1.5 Definition of Terms

- 1. In this research, 'telemedicine' refers to a system that uses technology to provide counseling, advice, and supervision of medical treatment which the client administers by herself. Communication between client and provider may be by phone, video call, text messaging, or combination thereof.
- 2. 'Self-termination of pregnancy' refers to the use of medication abortion at home (or outside the clinic setting).
- 3. 'Telemedicine services for abortion self-care' means the provision of pregnancy termination services for pregnant women with a gestational age of less than 12 weeks using remote consultation through an on online platform. The service employs a clinical process that ensures safe and effective treatment. Trained doctors and clinicians provide pre-service counseling, support, instructions, and follow-up throughout the pregnancy termination process via an online system.
- 4. 'Service user' refers to a client who terminates her pregnancy through telemedicine, and includes service before, during and after the abortion.

5. In this study, 'Human-Centered Design' (HCD) refers to the process of solving problems from the perspective of the abortion client.

Chapter 2: Review of Related Literature

2.1 Situation of Pregnancy Termination in Thailand

The issue of termination of pregnancy in the context of Thailand has been a controversial issue for a long time. The abortion debate covers issues of legal consequences, socio-cultural disruption, gender roles, and moral or religious issues. In the past, Thai society would view unplanned pregnancy as the fault of the woman, and her inability to control her fertility. More recently, access to abortion has overlapped with rights of LGBT people in reproduction. The state and politicians have oscillated from pro-choice and anti-abortion positions, and shifting criteria for what is legal and illegal pregnancy termination. Historically in Thailand, there were limitations on effective reproductive health options, and the government and society often turned a blind eye when women and couples sought pregnancy termination from illegal practitioners or abortifacients. Abortion was especially stigmatized if the pregnancy was out-of-wedlock (Chalidaporn Songsamphan, 2018). Yet, there could be no denying the legitimate demand for abortion, despite the risks of injury or death if going outside the official medical system. As a result, there are 30,000 cases of morbidity and/or mortality attributable to unsafe abortion in Thailand each year, and that figure is probably an underestimate of the problem, giving the difficulty of reporting cases (RSA Thai, 2021).

As of this report, it is legal to terminate a pregnancy with a gestational age of less than 20 weeks in Thailand. On February 6, 2022, the Royal Gazette Announced the Criminal Code Amendment Act, No. 28, 2021, to amend the under-12-weeks restriction on abortion that had been in force since 2021 and allowed abortion in case of rape, incest, and threat to the health of the mother. The new law allows women more time to collect information and, with her partner, come to an informed decision about pregnancy termination. The new law came into force on February 7, 2023.

The Government Gazette published the announcement of the Ministry of Public Health (MOPH) on examination and consultation for elective termination of pregnancy on September 26, 2022, stating that a pregnant woman who is 12-20 weeks pregnant, is to be examined and provided with individual counseling before the provider and client agree to

termination of pregnancy. This is not new abortion legislation, but rather an extension of the period when an abortion is legal.

2.2 Telemedicine service

The term 'telemedicine' is a portmanteau comprising the Greek word "tele" meaning distance and "medicine" from the Latin word meaning "treatment." The World Health Organization (WHO) has defined telemedicine as the provision of health services to people in remote areas where distance and/or travel is a barrier. The service is provided by medical professionals using the latest information technology to communicate and exchange information for diagnosis, treatment, and prevention of disease (WHO, 1970, cited in Waranya Sittimphong, 2021).

The Thai Medical Council (2020) has defined telemedicine as medical or clinical communication from a physician or qualified healthcare professional under the aegis of a public or private hospital to provide counseling, instructions, or other support by using technology to communicate remotely.

This study examined the issue of telemedicine in the context of services related to sexual and reproductive health rights and, more specifically, regarding guidelines for termination of pregnancy services which women can assess by using oral medication which she can consume by herself at home or other setting of her choice. There is documented research showing that telemedicine services are highly accepted and, importantly, that the clinical outcomes are just as good as visiting a clinic in-person (Endler, et al., 2019).

From the review of the literature on the telemedicine for termination of pregnancy, it can be seen that a number of countries/territories have introduced this service as part of the routine health care system. In Scotland, the local government issued a law that allows self-termination of pregnancy for gestational age of less than 12 weeks, as long as there is consultation and guidance with a medical professional, e.g., over the phone. One study looked at the experience of telemedicine abortion clients and found that this approach made abortion accessible to virtually everyone in the country (Reynolds-Wright, et al., 2021). The Canadian NGO (Women on Web, or WOW) provides an independent counseling service for termination of pregnancy to women in Germany who wish to terminate a pregnancy. That example shows how telemedicine has erased borders and obstacles to obtaining information and services related to pregnancy termination.

In Thailand, telemedicine has been used in the treatment of various diseases to increase access to services through information technology. Thailand still has populations in remote and rugged parts of the country where it is not easy to travel to a hospital. Thus, telemedicine has proved to be a safe, effective, and timely strategy to link clients in need of urgent care with specialized clinicians. As of this report, telemedicine in Thailand is being applied to many diseases such as diabetes, heart disease, hypertension, etc., (Wanya Sitthongkong, 2021).

2.3 Concepts of Client Satisfaction

Client satisfaction is an indicator of quality outcomes in hospital health care. It divides the quality of care into two parts: (1) *Technical efficiency* (system) depends on access to care; and (2) *Efficiency of care* which depends on having the skills to use interventions with confidence, for example, in clinical care, interpersonal care, and social standards (Donabedian 1988, cited in Juthalak Detkasem 2021).

In addition, there is the concept of personal satisfaction which reflects the inner feelings of the service recipient. It is a service response that is observed by behavior and a systems perspective and informs the decision of the prospective service recipient to seek care from a service provider that results in resolution of a health problem (Nonglak Suwisit et al., 2013).

The WHO (2006, cited in Juthalak Dejkasem 2021) describes six dimensions of quality of health services as follows:

- 1 . Effective: The objective is to achieve health outcomes for individuals and communities on the basis of necessity;
- 2. Efficient: This refers to the use of resources for maximum benefit and avoiding negative consequences;
- 3. Accessible: This means the service is appropriate in terms of time, so that there is optimal use of time, and the provider has the resources and skills appropriate to the medical need for treatment;

- 4. Acceptable/Patient-centered: This means that the provider is taking into account the satisfaction and needs of each individual client/patient and taking into account the sociocultural dimension as well.
- 5. Equitable: There must not be variance in service quality depending on the attributes of the client, e.g., gender, race, ethnicity, socio-economic status, etc.
- 6. Safety: The service is provided in a way to reduce the risk/harm to the service recipient to a minimum.

The review of the literature on the concept of client satisfaction indicates that this dimension needs to be assessed at both the individual and system levels.

2.4 Related Research

In the context of the present study, the relevant literature can be grouped into two categories: Problems and reasons for termination of pregnancy; and Satisfaction with the telemedicine services.

2.4.1 Research Related to Unwanted Pregnancy

The Thai literature on unwanted or unplanned pregnancy includes both qualitative and quantitative studies. The details are as follows.

Causes of unwanted pregnancy: Most of the related research focuses mainly on students or adolescents. The findings indicate that the main cause leading to unwanted pregnancy is problems related to birth control and social factors. Chorthip Pholkusol et al (2021) found that unplanned pregnancy among older couples was due to the fact that the couple did not think they were fecund and, hence, did not practice birth control. Other reasons include forgetting to take birth control pills or taking oral contraceptives sporadically. Parichat Arayajaru et al (2019) studied the life experiences of teen mothers and found that common causes of the pregnancy were lack of use of any birth control, forgetting to take the birth control pills on schedule, or practicing ineffective methods of birth control. In Thailand, there is the persistent belief that birth control is primarily the responsibility of the woman in the relationship, and that leaves couples more prone to error if the man does not share the burden or responsibility to help prevent unwanted pregnancy.

These findings are consistent with the research of Angkhana Narongrit (2017) who studied unwanted pregnancy among full-time students. Common reasons for the pregnancy include use of ineffective methods of birth control, lack of convenient access to birth control, misconceptions about unsafe sex, lack of male partner responsibility for birth control, and general lack of knowledge about birth control. There are also cultural factors which can lead to unwanted pregnancy. These include beliefs, values, and social norms, for example, that are instilled in women to subordinate themselves to a man's decision in sexual relations (as well as other dimensions of daily life). Relationships are often governed by the prevailing traditions and culture of courtship of women, and what it means to be a woman. In patriarchal societies (such as Thailand), there is considerable gender inequality, and women generally lack bargaining power over many dimensions of life decisions including sex, and that can easily lead to unwanted pregnancy.

Societal norms of sex and pregnancy: In Thailand, despite increasing acceptance of premarital sex, having a pregnancy out-of-wedlock is still considered sinful, or irresponsible. Invariably, the woman in the relationship will shoulder more of the blame and negative stigma if she has a child outside of marriage or a steady relationship. The family, school, and religion all teach condemnation of pregnancy and childbearing out-of-wedlock. Female students who become pregnant before completing their studies usually have to drop out of school. Thus, unplanned teen pregnancy can derail their life goals and aspirations, especially of adolescent females. Without access to safe and effective termination of pregnancy, too many young women resort to unsafe practitioners or ineffective abortifacients, often with tragic consequences (Krishnachot Bualah, 2020).

Patcharin Sumsiripong (2019) studied the causes of pregnancy termination and found that the decision to have an abortion was commonly related to economic factors, i.e., not having the financial resources to raise a child. Other researchers have looked at abortion as part of the broader issue of women's reproductive health rights. This leads to a discussion of the need for comprehensive sex education starting at pre-adolescence, and educating boys that coercive sex behavior is wrong (Orathai Panpetch, 2020).

Pokin Sakarinkul (2007) also studied sexual and reproductive health problems, including unplanned pregnancy, abortion, STI, and HIV, and the toll of morbidity and mortality this takes on women. In Thailand, gender role/responsibility should be a dimension that involves both males and females more equally. Therefore, the researcher advocates for proposals to advance gender issues to the forefront of development to create a more equal society in Thailand's future.

2.4.2 Research Related to Effectiveness and Satisfaction with Telemedicine

Juthalak Detkasem (2021) has studied factors affecting satisfaction of using telemedicine services in hospitals during the Covid-19 epidemic in Thailand. The success of this approach has led more hospitals to introduce telemedicine systems for remote care and treatment. Juthalak studied satisfaction of hospital-based telemedicine services, and proposes guidelines for improving the telemedicine system. That study found that different demographic factors had different effects on client satisfaction with the remote medical system. Cost of care and rights to access health insurance benefits were not affected by the telemedicine system.

Outside of Thailand, there have been numerous studies of patient satisfaction with telemedicine, which spiked during the Covid-19 pandemic (Orrange, Patel, Mack, and Cassetta, 2021). Medical consultation via video or telephone became much more common during the pandemic. The above study looked at the experience of 368 clients age 18 years or older, and found that the clients were highly satisfied with the telemedicine encounter. Respondents appreciated the increased privacy with telemedicine, and video calls were preferred over regular phone communication. The clients trusted the practitioners providing the telemedicine service, and complied well with the treatment regimen. Clients also experienced considerable savings in cost and time for the telemedicine encounter.

Returning to studies in Thailand, one researcher conducted a case study of cost-effectiveness of telemedicine in Ao Leuk District, of Krabi Province in the south region of the country (Chayanit Kulratmaneeporn, 2008). That study found that females were more knowledgeable about the telemedicine service than their male counterparts. In the case study, most of the clients were members of a group of patients with chronic conditions (e.g.,

diabetes, hypertension), and telemedicine was used to follow up on their condition and adherence to the treatment regimen. Factors influencing the use of telemedicine services were age, income, disease, self-assessment of health, frequency of trips to the hospital, distance and travel time of patients. The telemedicine for patients with diabetes and/or hypertension was cost-effective and equivalent to in-person care by going to the hospital. Clients appreciated the convenience of telemedicine and the reduced need to travel outside the home. Still, there are patients who could use telemedicine but prefer to see the doctor in-person, primarily for psychological reasons rather than clinical need. Most of the patients who used telemedicine were satisfied with the service.

Another Thai study investigated factors affecting attitude and intention to choose telemedicine through Ramathibodi Hospital (Thanaporn Thongjood, 2021). Clients were highly satisfied with the service, and appreciated the privacy and confidentiality that is not possible by going to the hospital in-person. The clients had no difficulty in communicating with the physician using their personal communication devices, and the connection was never interrupted. However, there was some concern among a minority of clients about the risk of disclosure of personal information or hacking by using platforms on the Internet for the telemedicine encounter.

2.5 Conceptual Framework

Quantitative Independent Variables **Individual Factors** Dependent Variables 1. Gender 2. Age Satisfaction with the Telemedicine Service 3. Religion 1. The experience of using the telemedicine 4. Nationality system in general 5. Marital status 2. The experience of using the service for 6. Career self-termination of pregnancy via 7. Current residence telemedicine 3. The service provided by personnel in self-Factors Affecting Choice termination of pregnancy through telemedicine 1. Channels for service 2. Reason for choosing service Qualitative - A study of 5 telemedicine clients for self-termination of pregnancy - Client satisfaction survey results of termination of pregnancy via telemedicine system

Chapter 3: Methodology

3.1 Research Design

This study used both quantitative and qualitative data collection methods. An online structured questionnaire was administered for the quantitative component, and in-depth interviews were conducted with a small group of clients. Questions focused on satisfaction with pregnancy termination via telemedicine, and suggestions for improvement of services.

3.2 Population of Interest and Sample

3.2.1 Target Population

The population for this study is clients of a pregnancy termination service by telemedicine through the southern region medical clinic operated by PPAT.

3.2.2 Calculation of the Desired Sample Size

Quantitative

The sample for the quantitative component is a selection of clients who terminated their pregnancy through the telemedicine system of PPAT during August to November 2022. The researcher applied the Yamane formula to determine the desired sample size for a confidence interval of 95% and with the following specifications:

n =
$$\frac{N}{1+Ne^2}$$

N = 188 (total client population during the time period)
e = 0.05 (variance)

where:

n =
$$\frac{188}{1+188 (0.05)^2}$$

n = 127.9
n = 128 (target number of completed questionnaires: 100)

The target number of completed questionnaires is less than the prescribed sample size due to refusal to participate in the survey.

3.2.3 Sample

Quantitative component

The sample in the quantitative study was the clients of telemedicine abortion service who were selected by non-probability sampling. Individuals who agreed to participate in the study were sent a questionnaire via an online platform, and which they filled out themselves.

Qualitative component

The researcher purposively selected five clients of the PPAT telemedicine abortion service whose characteristics were in accordance with the research objectives. Data were collected using in-depth interviews with guidelines for questions.

3.3 Research variables

3.3.1 Independent variables

Individual variables

- 1. Gender (Sex)
- 2. Age
- 3. Religion
- 4. Nationality
- 5. Marital status
- 6. Occupation
- 7. Current residence

3.3.2 Dependent variables

In this research, the dependent variable was client satisfaction with the abortion service through telemedicine. Satisfaction was further defined across three dimensions: Experience using telemedicine in general; Experience using telemedicine for self-termination of pregnancy; and satisfaction with the service of the PPAT service personnel.

3.4 Data Collection Instruments

3.4.1 Quantitative

The collection of the quantitative data was done by self-administered questionnaire, which was divided into the following four parts:

Part 1: General information about the client, e.g., gender, age, religion, nationality, marital status, occupation, and area of current residence.

Part 2: Method and intent to choose the telemedicine service.

Part 3 Satisfaction with telemedicine self-termination of pregnancy experience, and satisfaction with the PPAT service personnel. This part of the questionnaire used a 5-point Likert scale to score response as follows:

Score	Level of Satisfaction
5	Mostly agree/satisfied
4	Strongly agree/satisfied
3	Indifferent/moderately satisfied
2	Disagree/unsatisfied
1	Strongly disagree/dissatisfied

Part 4: Recommendations for improving the telemedicine system for self-termination of pregnancy and referral of others who may benefit from the service.

3.4.2 Qualitative

The discussion guide for the in-depth interview had three parts, as follows:

Part 1: Experience with telemedicine in general

Part 2: Experience with telemedicine for self-termination of pregnancy

Part 3: Performance of the service personnel at the PPAT clinic

3.5 Research Hypothesis

Different age of clients has different effects on the level of satisfaction in using telemedicine for self-termination of pregnancy.

3.6 Data Collection

The researcher collected data with an online questionnaire developed through Google Forms given the ease of use. Data were also collected through in-depth interviews using a semi-structured questions guideline.

3.7 Data Analysis

3.7.1 Quantitative

The quantitative data were processed using univariate descriptive statistics, such as range, mean, median, standard deviation, frequency distributions, and percentages. Inferential statistics for the bivariate analysis used the F-test (ANOVA).

3.7.2 Qualitative

The qualitative data were processed using content analysis and synthesis.

Chapter 4: Results

This chapter presents the results of the analysis of data from the survey of satisfaction with telemedicine service to self-terminate a pregnancy. The research team used both quantitative and qualitative data collection methods and synthesized the findings. This chapter presents the results of the analysis by the objectives of the study. The following are details.

4.1 Findings of the Quantitative Component

The quantitative data were processed using descriptive research and inferential statistics. The results are presented by four sections, in accordance with the objectives of the study, as follows:

- Section 1 General information of the respondent
- Section 2 Data on choice of service
- Section 3 Satisfaction with self-termination of an unwanted pregnancy by telemedicine
 - Part 1 Satisfaction with use of the telemedicine service
 - Part 2 Satisfaction with understanding of the telemedicine service
 - Part 3 Satisfaction with the performance of the service personnel
- Section 4 Referral of the telemedicine service and additional recommendations
 - Part 1 Trends in referral of the telemedicine service
 - Part 2 Recommendations for improving the telemedicine service

4.2 Quantitative Component

4.2.1 General Characteristics of the Sample

Since this was a sample of 100 abortion clients, nearly all the respondents indicated that their gender was female (Table 4.1). Oddly, however, five of the clients did not want to specify their gender in the self-administered questionnaire. The average age of this sample of clients was about 28 years (range 15 - 45). Most respondents were between 25-29 years old (32.0%), followed by 20-24 years (23.0%), and age 30-34 years (18.0%). The vast majority of the clients were Buddhists (74.0%), followed by unspecified religion (22.0%), and Muslim (4.0%). Similarly, three-fourths of the sample were Thai (77.0%) followed by unspecified nationality (22.0%), and Laotian (1.0%). Two-fifths (40.0%) of the sample were single (never-married), while a similar proportion (39.0%) were married (11.0%) or cohabiting with a partner

without a marriage license (28.0%). It is noteworthy that 13% of the sample said they were a full-time student, but this is probably an underestimate since 42.0% would not specify their occupation, possibly out of concern of being scolded if they said they were still a school student with an accidental pregnancy. Because the telemedicine service is national in scope (via the Internet and phone links) the clients come from many of the 77 provinces of Thailand. (Indeed, the telemedicine service in this research was provided by a single PPAT medical clinic in one city of the southern region.) Thus, province and region of residence is less significant with telemedicine clients compared to those attending a physical clinic. That said, it is noteworthy that two-thirds of the sample said they lived in the south region of Thailand, which is also the least populous region. Clients may have felt more comfortable knowing that the attending clinic was also in the south region and, if problems arose, would be more accessible to an in-person visit. Still, only 7% of clients were from the province where the PPAT clinic is located.

Table 4.1: General Characteristics of the Sample of Telemedicine Clients (N = 100)

	N	%
Gender		
Female	95	95.0
Unspecified	5	5.0
Total	100	100.0
Age (years) (mean \pm SD = 27.8 \pm 6.7	; range 16 - 45)	
15 – 19	11	11.0
20 – 24	23	23.0
25 – 29	32	32.0
30 – 34	18	18.0
35 – 39	8	8.0
40 – 44	7	7.0
45 – 49	1	1.0
Total	100	100.0
Religion		
Buddhism	74	74.0
Islam	4	4.0
Not specified	22	22.0
Total	100	100.0

Nationality Thai 77 77.0 Lao 1 1.0 Unspecified 22 22.0 Total 100 100.0 Marital Status Single 40 40.0 Marifed 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 10.0 10.0 Nakhon Si T		N	%
Thai 77 77.0 Lao 1 1.0 Unspecified 22 22.0 Total 100 100.0 Marital Status Single 40 40.0 Married 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Private company 18 <td< td=""><td>Nationality</td><td></td><td></td></td<>	Nationality		
Unspecified 22 22.0 Total 100 100.0 Marital Status Single 40 40.0 Married 11 11.0 10.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation 13 13.0 Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence 8 8.0 Krabi 10 10.0 Nakhon Si T	Thai	77	77.0
Total 100 100.0 Marital Status 40 40.0 Married 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 <td>Lao</td> <td>1</td> <td>1.0</td>	Lao	1	1.0
Marital Status 40 40.0 Married 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation 8 8.0 Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence 8 8.0 Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 <td>Unspecified</td> <td>22</td> <td>22.0</td>	Unspecified	22	22.0
Single 40 40.0 Married 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence 1 1 Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 Songkhla	Total	100	100.0
Married 11 11.0 Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence 8 8.0 Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi <td>Marital Status</td> <td></td> <td></td>	Marital Status		
Co-habiting 28 28.0 Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 <	Single	40	40.0
Divorced/widowed/separated 6 6.0 Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Married	11	11.0
Unspecified 14 14.0 Other 1 1.0 Total 100 100.0 Occupation 3 13.0 Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence 8 8 Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Navathiwa	Co-habiting	28	28.0
Other 1 1.0 Total 100 100.0 Occupation 3 13.0 Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Divorced/widowed/separated	6	6.0
Total 100 100.0 Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Unspecified	14	14.0
Occupation Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence *** *** Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Other	1	1.0
Student 13 13.0 General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence *** *** Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Total	100	100.0
General employee 8 8.0 Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Occupation		
Housewife 2 2.0 Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Student	13	13.0
Unemployed 6 6.0 Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	General employee	8	8.0
Government 2 2.0 Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Housewife	2	2.0
Farmer 2 2.0 Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Unemployed	6	6.0
Private company 18 18.0 Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Government	2	2.0
Personal business 5 5.0 Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Farmer	2	2.0
Merchant 2 2.0 Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Private company	18	18.0
Unspecified 42 42.0 Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Personal business	5	5.0
Total 100 100.0 Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Merchant	2	2.0
Province of residence Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Unspecified	42	42.0
Krabi 10 10.0 Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Total	100	100.0
Nakhon Si Thammarat 9 9.0 Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Province of residence		
Trang 9 9.0 Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Krabi	10	10.0
Yala 8 8.0 Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Nakhon Si Thammarat	9	9.0
Songkhla 7 7.0 Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Trang	9	9.0
Chonburi 6 6.0 Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Yala	8	8.0
Surat Thani 6 6.0 Narathiwat 5 5.0 Phuket 5 5.0	Songkhla	7	7.0
Narathiwat 5 5.0 Phuket 5 5.0	Chonburi	6	6.0
Phuket 5 5.0	Surat Thani	6	6.0
	Narathiwat	5	5.0
Phang Nga 4 4.0	Phuket	5	5.0
	Phang Nga	4	4.0

	N	%
Phatthalung	4	4.0
Bangkok	3	3.0
Phitsanulok	3	3.0
Ang Thong	2	2.0
Nonthaburi	2	2.0
Phetchabun	2	2.0
Samut Prakan	2	2.0
Chachoengsao	1	1.0
Chaiyaphum	1	1.0
Chiang Rai	1	1.0
Loei	1	1.0
Nakhon Ratchasima	1	1.0
Pattani	1	1.0
Rayong	1	1.0
Ratchaburi	1	1.0
Sing Buri	1	1.0
Sukhothai	1	1.0
Udorn Thani	1	1.0
Abroad	1	1.0
Unspecified	1	1.0
Total	100	100.0
Region of residence		
South	68	68.0
Central	16	16.0
East	8	8.0
Northeast	4	4.0
North	1	1.0
West	1	1.0
Abroad	1	1.0
Unspecified	1	1.0
Total	100	100.0

4.2.2 Accessing the telemedicine service

The most common way (68.0%) which this sample of abortion clients accessed the telemedicine service was through Internet search (Google, Yahoo!), followed by acquaintance referral (9.0%), other referral (6.0%), and social media (Facebook, YouTube) (6.0%) (Table 4.2).

Table 4.2: How the Client Knew about the Telemedicine Service

Source of knowledge/referral	N	%
Internet search (Google,	68	68.0
Yahoo)		
Friend referral	9	9.0
Social media (Facebook,	6	6.0
YouTube)		
Referred by a client	6	6.0
Other referral	6	6.0
Other	3	3.0
Hotline #1452	2	2.0
Total	100	100.0

4.2.3 Reason for choosing telemedicine

The reasons for choosing pregnancy termination by telemedicine include remote distance from the clinic (15.7%), followed by need for privacy (15.4%), and no travel expense (12.7%) (Table 4.3).

Table 4.3: Reason for Choosing Telemedicine

Reasons for choosing telemedicine	%
Too remote from clinic	15.72
More confidential	15.38
Reduced travel cost	12.71
Other obligations (work, school)	11.04
Convenient to do at home/residence	10.37
Wanted to decide independently	9.36
There is someone to consult with	9.03
Fear social stigma	5.69
Covid-19	4.01
Childcare burden	4.01

Reasons for choosing telemedicine	%
Could not obtain medicines by self	2.68
Total	100.0

4.2.4 Satisfaction with the Telemedicine Service for Self-Abortion

Satisfaction was assessed using a Likert scale, as shown in Table 4.4.

Table 4.4: Satisfaction with the Telemedicine Service for Self-Abortion

Score	Mean	Interpretation
5	4.5 – 5.0	Most satisfied
4	3.5 – 4.4	Very satisfied
3	2.5 – 3.4	Moderately satisfied
2	1.5 – 2.4	Minimally satisfied
1	1.0 – 1.5	Not satisfied

4.2.4.1 History of Telemedicine Experience

From the questions on the experience of using the telemedicine system, it was found that the majority of the sample of clients were "Most Satisfied." Respondents cited the easy access, the clear guidelines for the service, and the reliability of telemedicine for self-termination of pregnancy. The clients felt that the telemedicine system was as effective as going to the clinic in-person (Table 4.5).

Table 4.5: Satisfaction with Telemedicine for Abortion Self-Care System

Quality of Telemedicine for Abortion Self-Care	Score		
	Mean	SD	Interpretation
Experience with the telemedicine system			
Overall satisfaction	4.65	0.435	Most satisfied
1. Telemedicine system is easy to access	4.69	0.563	Most satisfied
2. Guidelines on the website help understand the	4.60	0.586	Most satisfied
procedure			
3. The service system is reliable	4.65	0.520	Most satisfied
4. The system is easy to understand and smooth	4.59	0.534	Most satisfied
5. The telemedicine system frees up time from travel to a	4.82	0.435	Most satisfied
clinic			

Quality of Telemedicine for Abortion Self-Care	Score		
	Mean	SD	Interpretation
6. Using a telemedicine system is as effective as going to a	4.60	0.636	Most satisfied
clinic			
7. The system can edit/correct information in real-time	4.52	0.627	Most satisfied
8. Telemedicine is an acceptable pregnancy termination	4.68	0.548	Most satisfied
9. I would use this service again if necessary	4.67	0.682	Most satisfied

4.2.4.2 Satisfaction with the Telemedicine Experience for Self-abortion

Table 4.6 shows more dimensions of satisfaction with the telemedicine service. The majority of the sample of clients were "Most Satisfied" with the telemedicine service. The respondents cited convenient payment channels (online transfer), text messaging reminders from the clinic, and delivery of the abortion medication was swift, and the packaging kept the medicines in good condition. The clients appreciate the fact that the clinic monitored their situation before, during, and after the procedure. The clients also felt they could express their feelings openly. Telemedicine enabled the women to schedule an appointment that was most suitable for them, and they received prompt responses to their questions. The service fees were perceived to be reasonable and affordable.

Table 4.6: Satisfaction with Telemedicine for Abortion Self-Care Service

Quality of Telemedicine for Abortion Self-Care	Score		
	Mean	SD	Interpretation
Experience with the telemedicine service			
Overall Satisfaction	4.63	0.404	Most satisfied
1. I can schedule an appointment at the right time	4.56	0.556	Most satisfied
2. I get a quick reply when I have any questions	4.56	0.574	Most satisfied
3. I was tracked before/during/after taking the medication	4.64	0.578	Most satisfied
4. I can express my thoughts and feelings effectively	4.62	0.546	Most satisfied
5. Reasonable service fee	4.47	0.674	Very satisfied
6. Payment methods (online transfer) are convenient	4.74	0.485	Most satisfied
7. Fast delivery of medication	4.67	0.604	Most satisfied
8. Package delivered in good condition	4.68	0.530	Most satisfied
9. Text messaging reminders are helpful to me	4.71	0.498	Most satisfied

4.2.4.3 Satisfaction with the Performance of the Service Personnel

The majority of the sample of telemedicine clients were "Most Satisfied" with the performance of the PPAT service personnel. Doctors/nurses are easy to communicate with and they understand the concerns of the client. They provide clear advice and are friendly and helpful. The clinic staff also provide education on contraceptive methods to help the client prevent a repeat unwanted pregnancy, and they do this through the telemedicine platform (Table 4.7).

Table 4.7: Satisfaction with the Performance of the Service Personnel in the Telemedicine Service

Quality of Telemedicine for Abortion Self-Care	Score		
	Mean	SD	Interpretation
Performance of the service personnel			
Overall Satisfaction	4.69	0.501	Most satisfied
1. The staff gives detailed advice resulting in	4.67	0.587	Most satisfied
choosing the telemedicine service			
2. The service personnel are friendly and helpful	4.69	0.526	Most satisfied
3. Staff are willing to answer questions when in doubt	4.70	0.577	Most satisfied
immediately			
4. Doctors/nurses can easily communicate with the client	4.70	0.522	Most satisfied
5. Doctors/nurses understand concerns and provide clear	4.70	0.541	Most satisfied
advice			
6. Staff educate clients on contraception through the	4.66	0.572	Most satisfied
telemedicine			

4.2.5 Recommendations for Improving the Telemedicine Service and Referral of Others

4.2.5.1 Referral of the Telemedicine Service to Others in Need

This study assessed client motivation for sharing their satisfaction with the telemedicine system and recommending it for other women in need. The instrument to assess this dimension was the Net Promoter Score (NPS). The levels of promoter scores are shown in Table 4.8 below.

Table 4.8: Level of Client Support for Referring Others in Need to the Telemedicine Service

Level of Support (Score)	Interpretation
9 – 10	Promoter
7 – 8	Passive
0 – 6	Detractor

The Net Promoter Score (NPS) = % who are promoters minus the % who are detractors

Table 4.9 shows the distribution of the sample into 'promoters,' 'passives,' and 'detractors' when asked if they would recommend the telemedicine service to others in need. Potential scores range from 0 to 10. The Net Promoter Score is simply the percent who are promoters minus the percent who are detractors. In this sample of self-abortion clients, the majority were 'promoters' (56%). The detractors accounted for 26% of the sample, while just under one in five (18%) were indifferent about the service. This yields a Net Promoter Score of 30 (percentage points).

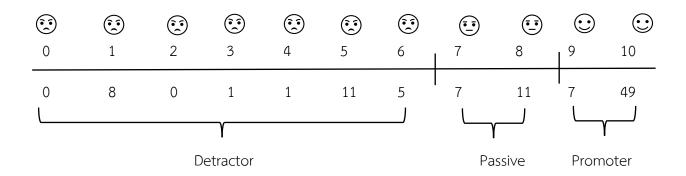


Table 4.9: Distribution of the Sample by Level of Support for the Telemedicine Service

Level of Support	Score	N	%
Promoter	9 – 10	56	56.00
Passive	7 – 8	18	18.00
Detractor	0 – 6	26	26.00
Total	0 - 10	100	100.00

Net Promoter Score (NPS)	30 percentage points
--------------------------	----------------------

Analysis of client age and satisfaction with the telemedicine service

As noted earlier, the hypothesis of this research was that satisfaction with the telemedicine service for self-termination of unwanted pregnancy would differ significantly with age.

H₀: Clients of different ages did not differ in satisfaction with telemedicine for self-termination of pregnancy.

 H_1 : Clients of different ages experienced different levels of satisfaction with the telemedicine service for self-termination of pregnancy.

Table 4.10 Analysis of Variance in Differences between Age and Satisfaction with Telemedicine

ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	40.205	23	1.748	1.224	.252
Within Groups	108.545	76	1.428		
Total	148.750	99			

Table 4.10 shows the results of the one-way analysis of variance. The p value of the Between Groups F-test was 0.252, which means that the H_1 hypothesis is rejected. In other words, age of the client had no effect on the level of satisfaction of using telemedicine services for self-termination of pregnancy.

4.2.5.2 Recommendations for Improving the Telemedicine Service

Most of the clients in this sample appreciated the service of personnel (physicians) in providing counseling before and after the abortion. The clients appreciated the effort of the clinic staff to follow up with them to make sure they were well and not suffering any side effects. In sum, the counseling provided by the PPAT clinic staff was good quality and met the needs of the clients. Knowing that there is a medical team on-call who are ready to give advice and address any concerns helped ease the stress of pregnancy termination for the clients. This made the telemedicine service seem more personal and closer to home. That said, some clients still were hesitant to recommend the telemedicine service since any referral

for abortion is still somewhat taboo in Thai society, even today. Thus, despite being well-satisfied with the service, some clients preferred to just keep the news to themselves – even if a friend or relative might be in need of safe, effective and confidential pregnancy termination. Instead, clients recommended that PPAT do more to make the service well-known through reliable social media channels and public information campaigns. That way, any woman who needs the service will be able to find it with today's search engines or directly at the webpage.

Some of the respondents said that they heard of cases where staff in the clinic or hospital setting would speak harshly with women who had come for pregnancy termination. Thus, having the option of telemedicine might reduce encounters with personnel who tend to scold clients. That is another advantage of telemedicine, in that the client is interacting with only a select few personnel, and those staff have probably been sensitized to the need for compassionate care for women seeking abortion. One of the concerns of telemedicine abortion clients is that they will not be able to follow the instructions correctly and are at risk of an incomplete abortion. That would complicate everything since they would have to go to a hospital to complete the termination. A few clients complained that they did not receive the posted medicines in a timely way. They suggested that the clinic should use a reliable express mail service to ensure timely delivery of the medicines, since time is of the essence as the pregnancy advances.

4.3 Qualitative Component

This part of the research was a qualitative study to explore the level of satisfaction of clients with the telemedicine service. The quantitative component discussed in Section 4.1 can only provide a superficial impression of the service experience. Many of the dimensions of service satisfaction require a more in-depth perspective. Therefore, a qualitative study was used to help explain the quantitative findings. Accordingly, the researchers purposively chose a group of five clients who had performed a self-termination of pregnancy through the telemedicine service of the PPAT medical clinic in a southern province of Thailand. The researchers then conducted in-depth interviews with these women separately and remotely. The five respondents each came from a different province, namely, Trang, Songkhla, Samut

Prakan, Nakorn Si Tammarat, and Phang Nga Provinces. The following is a summary of the findings from the in-depth interviews.

4.3.1 Reason for Choosing Telemedicine to Self-terminate an Unwanted Pregnancy

The provision of telemedicine for self-termination of pregnancy is a pilot project in which interested clients can arrange for service through the www.ppat.clinic website. The service was launched on August 1, 2023, and publicized through various public relations channels of PPAT and other sites. The theme of the service is that it uses a Human-Centered Design to truly meet the needs of women. Although the remote service was originally conceived to help women whose travel was restricted by Covid containment measures, it soon became clear that it was the confidentiality of telemedicine for abortion that was its most important attribute. Abortion is still taboo in many parts of Thai society and, thus, telemedicine could provide maximum privacy for the woman with an unwanted pregnancy. In order to be legal, the abortion has to be administered by a licensed practitioner, who provides counseling prior to the procedure. Telemedicine can satisfy both these conditions, and the clinic can send medication abortion (two pills) directly to the client at an address or post office box she specifies.

Most of the clients in this study had no previous experience with telemedicine, not only for abortion, but any clinical procedure. The study also found that most clients learned about the PPAT telemedicine service by searching on the Internet and, secondarily, by referral from a friend, acquaintance, or other person who had used the service. That said, some clients remained concerned about their ability to follow the regimen as prescribed and avoid the danger of an incomplete abortion, which would require a hospital-based intervention.

"I learned about the [telemedicine] service by doing a search on Google. That led me to the link for PPAT and pregnancy termination." (HY03)

"I found the link [to the clinic] on the Internet. However, scanning the reviews on Tik Tok is scary. Some people felt that it had a lot of impact. They had to go to the hospital, and were sedated. It made me worried about making a drastic decision like this. I consulted with my boyfriend and other close friends. I learned more about the network of clinics, and which might be the best one to choose. I finally decided on the PPAT clinic in Songkhla

Province, and I called in to speak with a doctor. The next step is that the clinic gives you an ID using the LINE application. You add the LINE address and can contact the clinic directly that way if you feel uneasy or stressful. The clinic assured me that no one at my home would have to know [about the abortion]." (HY04)

"A friend of mine told me about the service. So, I searched on Google to learn more. I called in to get more information and was told that PPAT medical clinics offer the service on Saturdays. The branch that was closest to me was the Hat Yai branch, and that's why I chose this clinic." (HY02)

"At first I consulted with my older sister about the pregnancy, and that I needed to have an abortion. My sister had had the same experience and she referred me to PPAT. So, I did a Google search to get the phone contact, and I called to make an appointment." (HY05)

Nearly all the respondents gave the same reason for preferring the telemedicine service. That is, they wanted the privacy and confidentiality because, where they live, there is still serious negative stigma to have an abortion, especially for younger, single women. Another important factor was the reduction in cost by not having to travel to the clinic.

"I didn't want to have to travel to a clinic [for the abortion]. I knew that I would run into somebody who knew me along the way. I definitely did not want anyone else to know. I learned that there was an abortion clinic in Nakorn Si Tammarat [Thung Song] but I would have to go in person to receive service there. However, with telemedicine, I could just stay at home and take the medicines in the privacy of my own room." (HY04)

"It's good because you don't have to travel to the clinic. Also, no one else sees you when you do it by telemedicine. No one else needs to know." (HY01)

"It's so convenient. Plus, I have a busy schedule and don't have time to travel and wait at the clinic. It's much more private that way. It is very confidential." (HY03)

"It's because it is so convenient and no one else needs to know." (HY02)

"The problem is, if I go to the clinic and have to wait in the queue, then there is the risk that someone I know will see me there. Then I would be trapped. Either they would think I was there for an abortion or birth control. Either way, that would be embarrassing.

So, having the option of telemedicine solves that problem. Also, talking to the doctor through video call is the same as meeting the doctor in person. The doctor will ask the same questions and give the same advice, even if it is by video call. The only difference is that, by telemedicine, you have to wait a few days to get the medicines." (HY05)

The in-depth interviews showed that the inconvenience of having to travel to the clinic might cause a delay in the procedure if the client could not free up her schedule. However, with telemedicine it is much easier for the women to schedule a convenient time. Thus, every woman with an unplanned pregnancy should have this option, i.e., self-termination of the pregnancy by telemedicine.

"If you go to the clinic you may have to wait for a date when the doctor is on duty. That delay might push you beyond the time limit for a legal abortion. Also, it is embarrassing to have to go into the clinic and be asked all these personal questions, face-to-face. Instead, doing it online is easier for me since I can provide a lot of the information by myself without being interviewed. Also, with the online interaction, I feel I can be more open and franker in my comments and responses." (HY05)

Women in difficult circumstances may not have the necessary income to raise another child. Some women have all the children they want and do not want another. They may have health problems or have school or work obligations. These are the common reasons which clients give for wanting to terminate the pregnancy.

"I was afraid that my family would be angry. They are quite conservative. So, I tried to console myself, and convince myself that, if I'm not yet ready to have a child, it is OK to terminate the pregnancy. On the other hand, it seems so sinful in many ways. So, I had to resolve this debate in my mind and heart. If I decided to keep the pregnancy then, even if my boyfriend married me, he would be working in another province, and we'd only be together once a month. Also, we are just out of college and not yet in a position to raise a child. I would have to ask for money and support from my mother. Simply put, that would make me a burden on the family. Even if the family would agree to provide support, I would suffer from the guilt of knowing that I had disappointed my parents. If I had the abortion and

no one knows, then I could shoulder the regret and blame myself and not burden anyone else." (HY04)

"You see, I already have two children and can barely make ends meet. I just don't have enough money these days to raise another child. I just can't afford it right now." (HY05)

"My youngest child is only a year old. It is too soon to have another child." (HY01)

"I am about to graduate and complete my studies. I don't want to throw that away by carrying the pregnancy and dropping out." (HY03)

Four of the five cases who were interviewed claimed that the pregnancy was the result of a contraceptive failure, or that they practiced birth control sporadically. Some said they did not always take the birth control pill on schedule. One case said she didn't practice any birth control at all.

"I took the first cycle of pills. But, then, when the [break through] bleeding came a few days later, I thought that I was having my normal menstrual period. So, I stopped taking the oral contraceptives. It was my carelessness and lack of adequate knowledge about the pill." (HY05)

"I was taking the pill, but I forgot to take it every day sometimes." (HY01)

"I thought that the contraception was not effective. I had some bad experience before." (HY02)

"I had been taking the pill regularly. I don't know what happened. When I stopped taking the pill my period did not come." (HY04)

From the above it can be seen that the factors that cause unintended pregnancy come from lack of knowledge or understanding of reproductive health and contraception. This is not much different from previous decades. Women may know the methods of birth control, but they do not always use the method correctly (Napaporn Havanon, 1995). Lack of adequate reproductive health knowledge makes these women prone to unwanted pregnancy. Also, socio-economic pressures may lead to unsafe practices and choices.

4.3.2 Experience in Using Telemedicine for Abortion Self-Care

Even though the clients initially saw the advantage of telemedicine and self-termination of their pregnancy, some were concerned about their ability to take the medicines correctly, or having an incomplete abortion. Even though this is medication abortion, terminating a pregnancy is still considered bad. Also, some women might feel hesitant to do this on their own and by themselves. Thus, it is crucial for the physician to provide close counseling before, during, and after the procedure to bolster the confidence of these ambivalent and anxious clients.

"In my case, I wasn't worried about the risk. I was not anxious or worried. I saw the information on the positive results of this procedure, and that was credible enough." (HY01)

"I think that there might be some risk for some women who do not have anyone there to look after them. In my case, I was able to tell my older sister, and she could help me if there was a problem. But, some girls may just order the medicines and take the drugs themselves without anyone to support them at home. I think that could be risky." (HY03)

"At first I was scared because I didn't go to see the doctor specifically. I didn't go to the clinic. I was worried about side effects of the abortion pills. I was afraid that I might have bad cramping or hemorrhage. So, I had all these dark thoughts in my imagination. But, the doctor helped to calm me down, and reassured me about the safety and lack of bad side effects. Only a very small percentage of women have problems with this method. Still, I wanted to talk to someone who had done this before, and that person told me it was nothing to worry about. This method of abortion was news to me because, before, I thought there was only curettage abortion." (HY02)

"There is a concern that there might be excessive bleeding with this method. If so, what would happen if I was alone? The doctor advised me, if possible, to have someone be with me during the procedure. He suggested I take time off from work so that I wouldn't have to rush or would have time to recover. I still worried about the effectiveness of just taking two pills. So, I had to have a lot of coaching by the doctor through online chat. He said that if there was abnormal bleeding within an hour, then I should come into the clinic. It was comforting that I knew I could call the clinic any time." (HY05)

The clients also said that entering the information online was easy and simple; there was nothing confusing about it. They also complied well with the requirement to have an ultrasound to confirm the pregnancy and gestational age, and to send the image to the clinic through an online platform.

"I didn't need to call the clinic. I just logged onto their site and started filling out the form online. There was a simple questionnaire to fill in name, ID card number, cell phone number, etc. Then, the clinic confirms receipt of the information by text messaging to your phone. They give you instructions for each step in the process. It's not complicated at all. It's easy to understand, and the clinic responds quickly. They don't ask for a lot of information either. If you have any questions or concerns, you can ask via the LINE app, and the doctor will answer quickly." (HY03)

"It does not take much time. There is a clear process. They give you a link to communicate directly with the doctor. There is LINE address for the Admin section." (HY02)

The respondents all felt that the online counseling, the payment method, and the sending of the medication by express mail was convenient and went smoothly.

"The counseling was appropriate and convenient. I could ask anything through LINE app, and the doctor would answer swiftly." (HY03)

"I just filled out the information online, and then spoke to the doctor directly. There was no need to make any other contact. It made me feel safe by receiving personal counseling by the physician." (HY05)

The clients in this study generally felt it would be good for the clinic to keep their personal information in the database in case problems arose later on. However, the clients also wanted assurances that the information would be kept private and confidential.

"Yes, the clinic can keep the information for four or five years. It's possible that I may need a pregnancy termination in the future. If they have my data in their files, then they will know how my previous procedure went. Otherwise, no one else will have that information." (HY01)

"I have no problem with the clinic keeping my information. I trust the doctors and nurses to protect my confidentiality. Besides, patient privacy is mandated by the Thai Medical Council. The clinic may need this information for service statistics. So, it's OK if they keep it on hand." (HY03)

"The medical team should be able to keep my information. What if I have multiple repeat abortion, and the clinic has no history of my case? Repeat abortion like that is a sign of dangerous behavior and could be life-threatening. So, knowing the client's history should help the clinic to choose appropriate interventions." (HY05)

"I don't like the idea of the clinic keeping my personal information on hand. I had this procedure privately, and it is important that my family does not know." (HY04)

None of the clients in this study reported severe side effects. They only reported minor effects of the medication abortion.

"My side effects were some chills, pain like menstruation, a bit of bleeding. That lasted about a week. The doctor said that there could be some bleeding for about 10 days." (HY01)

"I didn't have problems with side effects. I only felt some nausea after taking the medication. There were no other symptoms, except for some abdominal pain. I still had some spotting for almost a month, but the amount of blood decreased each time. The doctor said that, if there is a lot of blood, I should contact the clinic via LINE app." (HY05)

"I have to work all the time in my job. I can't stop because I am self-employed. So, I just followed the doctor's advice. They told me that, if I was easily tired or lost more blood than usual, then I would feel dizzy. They advised me to take oral rehydration salts and drink sweetened water to ease symptoms." (HY05)

Clients were advised by the PPAT clinic on how to use effective contraception after the abortion to prevent a repeat unplanned pregnancy.

"I know that I could consult the doctor about birth control, but I didn't think that I would need it for a while. If I started having sex again, then I would take the contraceptive pill as before. But I'm still worried I may not take it correctly. Plus, my body is not the same as before. I am too nervous about having the sub-dermal contraceptive implant." (HY05)

"I am determined to take the pill correctly from now on. I will not mess up again." (HY03)

"I will use the contraceptive pills which the clinic gave me. But, I read that taking this brand of pills for many months might cause weight gain, acne, or other side effects. If that becomes a problem, then I would ask my partner to practice withdrawal or use a condom." (HY04)

"I will use the injectable contraceptive." (HY02)

"Last time, I was using the pill, but I forgot sometimes and, thus, had the unwanted pregnancy. This time I think I will have the subdermal implant. That way, I don't have to worry about forgetting." (HY01)

"They showed me pictures of the various birth control options, with explanation." (HY03)

"I know it's my responsibility to prevent a repeat unplanned pregnancy. The clinic cannot guarantee that for me. Still, if I have problems again, I am hoping the clinic will be able to help me." (HY05)

"I'll admit that I didn't know much about birth control before. I heard about the injectable, and I asked friends what their experience was. They told me that, with the injectable contraceptive, you stop having menstrual periods. I thought that might affect my moods, so I decided not to have the injectable. But, I also don't have confidence in the effectiveness of the pill. That's because I was using the pill when this unwanted pregnancy occurred." (HY02)

4.3.3 Experience with the Telemedicine System and Service

The respondents in the in-depth interviews spoke of the ease in filling out the information online, such as basic personal information, reading and signing the informed consent form, and making the payment for the pregnancy termination.

"The information they asked for was just basic information; not a hassle." (HY01) "It took me only ten minutes to fill out the form." (HY05)

"It's easy to get into the system. There, they just ask for name, citizen ID number, and contact information. They respond by text messaging to acknowledge the communication. Then, they will ask for more information about the pregnancy termination. The steps are very clear." (HY03)

The clients felt that the fee for service and payment options were "appropriate. I could pay through my bank application. It was easy." (HY03)

"I transferred the funds online, and send the payment information to the Admin section [of the clinic]. For me, I could afford the fee for the abortion. However, it might be more difficult if the client is younger and still in high school or college. I already had some savings for things like this. So, it was not a problem." (HY04)

The benefits package of the Universal Coverage Scheme (UCS, Gold Card) of the National Health Security Office (NHSO) covers the cost of pregnancy termination. However, if a client does not use this benefit, then the cost of the abortion may be a bit steep if they have little or no income. Still, clients with limited means felt the cost was worth it since the abortion would be safe and legal.

"Yes, the cost of the procedure was a bit high. But, considering the safety factor, it is appropriate. I could afford the cost. But, what about women who can't and are really in difficult circumstances? I've heard about those cases in the news. They have no way out, and some end up aborting or abandoning the fetus in a public bathroom. In my case, I could pay out of pocket – I didn't need to use the state health insurance." (HY05)

Some respondents complained a bit about the lack of continuous information from the clinic via the text messaging system. These clients wanted to be reminded when to start the medication abortion pills, and receive follow-up messages about symptoms after taking the pills. This may be an area for PPAT to improve the service in order to provide more reassurance to their remote clients.

"I didn't receive the text messages after the initial contact; but I knew that I could contact the doctor directly if I had concerns or worrisome symptoms." (HY05)

"I did receive a text message reminding me to take the pills on schedule." (HY04)

"The response was fast. After I sent the payment online, I soon received a text message telling me they received it. That was reassuring. Then, I just had to wait for the medicine to arrive. They told me it should arrive before noon the next day." (HY05)

4.3.4 Satisfaction with the Telemedicine Service Personnel

Another dimension of client satisfaction concerns their interaction with the PPAT service personnel. This is an important area, and the information can be applied directly to improving the telemedicine service. That said, the women in this small sample of clients were very satisfied by the concern, attention, and responsiveness of the clinic staff they interacted with. That finding is consistent with the results of the quantitative data analysis.

"I had a lot of questions for the doctor. The doctor was patient and answered all my questions. They provided counseling before, during, and after I took the pills. It was as if they were with me all the time." (HY04)

"I had been to other providers, but they didn't provide much counseling or information. They just wanted to give me the pills and take my money. However, the PPAT clinic was different. They were happy to talk with me a lot and answer all my questions." (HY02)

"The system works really fast. The staff answered all my questions right away. They understood my concerns. The medicine arrived quickly as well. I was very satisfied with the service. Their counseling and advice were very detailed." (HY01)

"I was very pleased with the staff. They sent me text messages online. They also sent the information as a sound clip which explained the steps and procedure. I felt the doctor was very responsive to my questions. I realize that the doctor had to counsel other clients at the same time. So, for me, it felt easy and personal." (HY03)

"I was a bit anxious when I took the medication. But the doctor assured me that everything would be fine. If I had any problems or concerns, I could contact the clinic at any time." (HY04)

"The counseling was good. I wasn't very concerned and didn't have a lot of questions. The steps were very clear and easy to follow. So, there was no need for lengthy LINE chats." (HY01)

"They sent me an audio clip to hear the instructions. They also sent pictures to show me what to do. The sound clip and pictures helped me a lot. For me, it is harder to read the print instructions. But, hearing and seeing the procedures made it easier." (HY05)

The clients were most appreciative that the PPAT clinic did not print their logo or name on the package of medicine that they sent to clients. That helped protect their anonymity and privacy.

"The package of medicines did not indicate who or where it came from. It also did not say what the contents were." (HY01)

Chapter 5 Summary of Findings and Recommendations

This client satisfaction survey on telemedicine services for self-termination of pregnancy in a PPAT clinic had the following objectives: 1. To assess client satisfaction with self-terminated telemedicine services; and 2. To find ways to improve the telemedicine pregnancy termination services. The information obtained from this study can be used as a guideline for the further development of telemedicine services. The research team first conducted a quantitative sample survey through an online questionnaire (Google Forms), with 100 clients of the telemedicine service. Next, the researchers conducted in-depth interviews with a sub-sample of five clients. The following is a synopsis of the findings.

5.1 Summary of Findings

5.1.1 Characteristics of the Sample

Most of the 100 clients in the quantitative, online survey were age 25-29 years, Buddhist, Thai nationals, single (never-married), and mostly resided in the south region of the country. The qualitative sample data consisted of five women age 22-28 years, who came from five different provinces: Samut Prakan, Trang, Phang Nga, Nakorn Si Tammarat, and Songkhla Provinces.

5.1.2 Access to the Service

About two-thirds of the quantitative sample had learned of the PPAT telemedicine service by Internet search (Google, Yahoo!). Others learned from a friend or acquaintance who had used the service. Clients could also access information about telemedicine abortion through social media platforms (Facebook, YouTube). A few called into the Hotline #1452.

The reason why these women opted for the telemedicine service was that they lived quite far from the clinic, and/or the privacy of the remote service, no need for travel, having competing obligations (work, school), feeling more comfortable doing the procedure in the privacy of one's home, wanting to be independent of others in having the procedure, and fear of social stigma or family blame if seen going to an abortion clinic.

5.1.3 Satisfaction with the Telemedicine Service

Overall, this sample of clients seemed quite satisfied with the telemedicine services for self-termination of an unwanted pregnancy. In particular, clients were most satisfied with the responsiveness and attention they received from the service personnel. They felt they could easily contact the medical personnel if they had questions or concerns. They felt that the counselors listened to their concerns and responded to their needs for reassurance. All the PPAT clinic staff were professional in their interactions. The qualitative data also confirmed the findings of the quantitative component on satisfaction with the pregnancy termination service.

As noted, most of the clients first researched the telemedicine service through the Internet, either going directly to the clinic website (www.ppat.clinic) or through search engines. Once they were reassured that the method of self-termination of abortion was safe and effective, with little risk of adverse sequelae, they could quickly register for the service. The majority of clients felt that the online exchange of information was straightforward and easy to complete. Similarly, the payment and drug delivery system were efficient and satisfactory. The rapid feedback by text messages from the clinic to the clients was important because it reassured women who had never used this remote service before. The clients particularly appreciated that the clinic sent the package of medicines to their home without printing the PPAT logo or clinic name on the return address. This helped to protect the client's privacy.

Telemedicine is still relatively new in Thailand (Kachitwan Ruangratanamporn, 2018). However, the travel restrictions and need for social distancing during the Covid-19 epidemic required greater flexibility and innovation in maintaining reproductive health services for Thai women. Thus, telemedicine with safe, self-administered medication abortion was an appropriate service for many women with unplanned pregnancy. That said, there remain some limitations in using the telemedicine system. This study found that there were gaps in the text message notification system, and some of the private express mail carriers were not as speedy as the EMS service of ThailandPost. There should be more public information dissemination about the service so that clients do not have to search the Internet to locate a clinic.

5.2 Discussion of Findings

This study found that the PPAT pregnancy self-termination telemedicine program is beneficial in providing services to people with unwanted pregnancy. The Covid-19 epidemic has forced people to rely more on remote and online services that in the pre-pandemic period. Furthermore, the younger generation of Thais is very comfortable using online communication platforms and, thus, telemedicine is a simple extension of what they do in everyday life. The availability of effective and safe medication abortion also makes telemedicine feasible. PPAT launched its telemedicine abortion service on August 1, 2022, and the service conforms to the guidelines of WHO, issued in March 2022.

A previous study by PPAT (2022) explored the need for self-termination of pregnancy and implementing a human-centered approach to a sensitive service such as abortion. It was found that most clients still lack knowledge and understanding on sexual and reproductive health rights. Nevertheless, when faced with an unplanned pregnancy, the women are able to access the information they needed to manage the situation, including the option of telemedicine to terminate the pregnancy. The women appreciate the telemedicine option because of the privacy and how it allows the woman to be in control of the procedure, and done at her own convenience. That way, she can avoid social stigma and family blame (Saneekan et al., 2022)

From the experience of actual clients, telemedicine eliminates travel expenses, and the clients felt like they could contact the doctor or the clinic with any questions or concerns, and at any time. This made the service seem personal and even more intimate than if they went to the clinic or a hospital. The telemedicine service also provides advice about birth control to prevent a repeat unplanned pregnancy, as well as advice on preventing STI.

Termination of pregnancy is legal in Thailand up to 20 months gestation, as long as a qualified practitioner provides or oversees the procedure. That said, abortion is still considered sinful in parts of Thai society, especially if the pregnancy is out-of-wedlock. Therefore, telemedicine abortion is an important alternative for women to minimize exposure to friends, relatives, or society at large. Studies, including this research, have shown that a principal reason for choosing telemedicine abortion is privacy and avoidance of stigma. In

addition, some of the responses in the qualitative, in-depth interviews suggest that the women appreciated the self-administered abortion via telemedicine because it transferred control of their situation from the practitioner to the woman herself. In that way, telemedicine abortion is empowering for women with an unplanned pregnancy who want a safe and effective option to resolve the situation.

Telemedicine for self-terminated abortion is an important innovation for Thailand to meet the needs of women and increase access to safe abortion. Indeed, in theory, telemedicine abortion is now available to any woman in Thailand wherever she lives. That is consistent with the idea that everyone should have access to a variety of abortion care options (e.g., at a health facility, telemedicine, etc.) including all the information needed to make an informed choice. There should be a client-friendly and conducive environment for the woman to make her own decision without being judged or stigmatized. Self-termination of pregnancy in the privacy of one's home is perhaps the ideal solution for many women. The procedure is safe, as data from WHO indicate a 97% efficacy rate (WHO, 2022).

5.3 Recommendations Based on the Research Findings

Based on the results of this study, the following are recommendations for the telemedicine service for termination of pregnancy:

- 1. The website should clearly show the fee schedule and different options for subsidizing the cost through the UCS of the NHSO or other benefits scheme.
- 2. There should be more public information dissemination about the telemedicine service so that women in need do not have to do time-consuming searches on the Internet, and which might lead them astray.
- 3. The most cost-effective mail delivery service should be used for rapid delivery of the abortion medication.
- 4. The system should support alternative channels for data collection other than addresses and phone numbers; it is the user's choice to provide additional contact or background information.

5.3.1 Recommendations for Future Research

- 1. There should be a study which collects more information on socio-economic factors of telemedicine service users.
- 2. There should be a study of the service provider's perspective to explore, in depth, factors affecting the service and to maximize client satisfaction.

References

(Thai Language References)

- Announcement of the Medical Council No. 54/2563. Guidelines for the practice of telemedicine and online clinics https://tmc.or.th/index.php/News/News-and-Activities/Telemedicine. Retrieved January 25, 2023.
- Chorthip Phonkusol and Siriwan Sang-in. (2564). The relationship between personal factors related to perceived risk of pregnancy and health behaviors of older pregnant women. Faculty of Nursing Journal Burapha University, 29(2), 24-35.
- Juthalak Detkasem. (2564). Factors Affecting Satisfaction in Using Telemedicine Services in Hospitals. (Master's Thesis). Thammasat University, Faculty of Commerce and Accountancy.
- Khachitwan Ruangratanamphon. (2562). Medical Malpractice: A Case Study of Telemedicine Treatment. Thesis. Faculty of Law, Pridi Banomyong, Dhurakij Pundit University.
- Krishnachot Bualah. (2563). Explaining Social Phenomena with a Rational Alternative Paradigm:

 Abortion in Thai Society. Journal of Liberal Arts, 20(2): 489-511.
- Napaporn Havanon. (2538). Women's responses to unwanted pregnancy and decision to terminate pregnancy. Chiang Mai. Women's Studies Center, Faculty of Social Sciences, Chiang Mai University.
- Nuchjaree Kijwan. (2511). Design Thinking: New Perspectives of the Thai Health System. Nursing Council Journal, 33(1): 5-14.
- Parichat Arayajaru, Wirawan, Klaihiran, and Jiraporn Anucha. (2562). Life experiences of teenage mothers: intentional/inadvertent repeated pregnancy. Journal of Research and Innovation in Health, 2(1): 177-185.
- Pokin Sakarinkul. (2550). A new perspective on sexual health. and reproductive health: Unplanned pregnancy and abortion. Lanna Public Health Journal, 3(2): 246-253.
- RSA Thai. (2566). A statement of facts about abortion in Thailand from the RSA volunteer network https://rsathai.org/contents/17600/. Retrieved February 13, 2023.

- Saneekan Rosamontri. (2565). Research Report Abortion Self-Care (ASC) Need Assessment and Context Sensitive Human-Centered Prototype. The Planned Parenthood Association of Thailand (PPAT) under the Patronage of Her Royal Highness the Princess Mother.
- Shayaniss Kulratmaneeporn. (2551). Efficiency and effectiveness of telemedicine services in the case of Ao Luek District, Krabi Province. (Doctor of Arts thesis). Chulalongkorn University, Demography Department.
- Thanaporn Thongjude. (2564). A Study of Factors of Telemedicine Examination Affecting Attitude and Intention: The Choice to Use the telemedicine Service at Ramathibodi Hospital. (Master of Management Thesis). Mahidol University, Management Program.

(English Language References)

- Endler, M., Lavelenet, A., Cleeve, A., Ganatra, B., Gomperts, R., & Gemzell-Danielsson.

 Telemedicine for medical abortion: a systematic review. *An International Journal of Obstetrics & Gynecology*, *126*(9): 1094-1102. (2019).
- John Joseph Reynolds-Wright, Anne Johnstone, Karen McCabe, Emily Evans, Sharon Cameron. (2020). Telemedicine medical abortion at home under 12 weeks gestation: a prospective observational cohort study during the COVID-19 pandemic. *BMJ sexual & reproductive health*, 47(4): 246-251.
- Orrange, S., Patel, A., Mack, W. J., Cassetta, J. (2021). Patient satisfaction and trust in telemedicine during the COVID-19 pandemic: Retrospective observational study. JMIR human factors, 8(2). doi:10.2196/28589.
- WHO. (2010). Telemedicine: Opportunities and developments in Member States: report on the second global survey on eHealth 2009. Geneva, World Health Organization.
- WHO. (2022). Abortion care guidelines. World Health Organization. https://apps.who.int/iris/ handle/10665/349316.

Appendix

Appendix A: Analysis of the Quantitative Data

Experience with the telemedicine	Level of Satisfaction (%)						
system	Strongly	Agree	So-So	Disagree	Strongly		
	agree				disagree		
1. Telemedicine system is easy to	73.0	24.0	2.0	1.0	0.0		
access							
2. Guidelines on the website help	65.0	30.0	5.0	0.0	0.0		
understand the procedure							
3. The service system is reliable	67.0	31.0	2.0	0.0	0.0		
4. The system is easy to	61.0	37.0	2.0	0.0	0.0		
understand and smooth							
5. The telemedicine system frees	84.0	14.0	2.0	0.0	0.0		
up time from travel to a clinic							
6. Using a telemedicine system is	67.0	27.0	5.0	1.0	0.0		
as effective as going to a clinic							
7. The system can edit/correct	59.0	34.0	7.0	1.0	1.0		
information in real-time							
8. Telemedicine is an acceptable	72.0	24.0	4.0	0.0	0.0		
pregnancy termination							
9. I would use this service again if	75.0	20.0	3.0	1.0	1.0		
necessary							

Experience with telemedicine	Level of Satisfaction (%)						
service	Strongly	Agree	So-So	Disagree	Strongly		
	agree				disagree		
1. I can schedule an appointment	59.0	38.0	3.0	0.0	0.0		
at the right time							
2. I get a quick reply when I have	60.0	36.0	4.0	0.0	0.0		
any questions							
3. I was tracked before/during/after	69.0	26.0	5.0	0.0	0.0		
taking the medication							
4. I can express my thoughts and	65.0	32.0	3.0	0.0	0.0		
feelings effectively							
5. Reasonable service fee	57.0	33.0	10.0	10.0 0.0			
6. Payment methods (online	76.0	22.0	2.0	0.0	0.0		
transfer) are convenient							

Experience with telemedicine	Level of Satisfaction (%)					
service	Strongly	Agree	So-So	Disagree	Strongly	
	agree				disagree	
7. Fast delivery of medication	73.0	22.0	4.0	1.0	0.0	
8. Package delivered in good	71.0	26.0	3.0	0.0	0.0	
condition						
9. Text messaging reminders are	73.0	25.0	2.0	0.0	0.0	
helpful to me						

Performance of the service		Leve	el of Satisfa	ction (%)	
personnel	Strongly	Agree	So-So	Disagree	Strongly
	agree				disagree
1. The staff gives detailed advice	72.0	24.0	3.0	1.0	0.0
resulting in choosing the					
telemedicine service					
2. The service personnel are	71.0	28.0	1.0	0.0	0.0
friendly and helpful					
3. Staff are willing to answer	75.0	21.0	3.0	1.0	0.0
questions when in doubt					
immediately					
4. Doctors/nurses can easily	72.0	27.0	1.0	0.0	0.0
communicate with the client					
5. Doctors/nurses understand	73.0	25.0	1.0	1.0	0.0
concerns and provide clear advice					
6. Staff educate clients on	70.0	27.0	2.0	1.0	0.0
contraception through the					
telemedicine					

Appendix B: Data Collection Instruments

1. Questionnaire for the quantitative data collection



Telemedicine for Abortion Self-Care Satisfaction Survey Form (PPAT)

Instructions: This questionnaire has four sections. The objective of the survey is to use the information to improve the abortion self-care telemedicine system. The information will not be used for other purposes. The data will be kept anonymous and PPAT will not publish any personal information. All personal information will be kept confidential. It should take about 5 minutes to complete the questionnaire.

5 minutes to complete the questionnaire.
Instruction: Please mark an \checkmark in the space which best reflects your answer
- Do you voluntarily agree to participate in this Telemedicine for Abortion Self-Care Satisfaction Survey?
☐ 1. Yes ☐ 2. No
Section 1: General information of the respondent
1. Sex(optional)
2. Age
3. Religion (optional)
4. Nationality (optional)
5. Marital status
1. Single 2. Married 3. Co-habiting 4. Divorced/widowed/separated 5. No response 6. Other
6 Occupation (optional)

7. Current residence (province)	•••••							
Section 2: Information on Service Selection								
8. How did you find a telemedicine service to self	f-termin	ate your pregnancy?						
1. Was advised by people who have used the service								
3. Was referral by a friend/acquaintance								
4. Searched the Internet (Google, Yahoo!)								
5. Social media (Facebook, YouTube)								
6. Referral from the #1452 counseling hot	line.							
7. Other (specify)								
9. Why did you choose a telemedicine service? (i.	e., abor	tion pills by mail) (Multiple						
response allowed).								
1. Covid-19 situation	<u> </u>	. Reduce travel expenses						
☐ 3. Having to step home with young child		. Too occupied with tasks/workload.						
\Box 5. The clinic is too far away	<u> </u>	. Society still does not accept						
	р	regnancy termination						
7. Maintain privacy	<u> </u>	. Fear of partner abuse						
\square 9. Wanted to decide for yourself	10). Unable to procure medication						
	ak	portion						
11. Feel more comfortable to do at home	eb 🔲 1	2. There was someone to help look						
	af	ter me during the abortion						
	pr	rocedure						
□13 Other								

Section 3: Satisfaction with the telemedicine self-abortion service

Quality of the service		Leve	el of Satisfac	ction	
	Strongly agree	Agree	So-So	Disagree	Strongly disagree
10. Experience with the telemo		<u>l</u> em			
1. Telemedicine system is easy	•				
to access					
2. Guidelines on the website					
help to understand the					
procedure					
3. The service system is					
reliable					
4. The system is easy to					
understand and smooth					
5. The telemedicine system					
frees up time from travel to a					
clinic					
6. Using a telemedicine					
system is as effective as going					
to a clinic					
7. The system can edit/correct					
information in real-time					
8. Telemedicine is an					
acceptable pregnancy					
termination					
9. I would use this service					
again if necessary					
11. Experience with the telemo	edicine serv	ice			
1. I can schedule an					
appointment at the right time					

Quality of the service	Level of Satisfaction					
Quanty of the service	Strongly agree	Agree	So-So	Disagree	Strongly disagree	
2. I get a quick reply when I						
have any questions						
3. I was tracked by the clinic						
before/during/after taking the						
medication						
4. I can express my thoughts						
and feelings effectively						
5. Reasonable service fee						
6. Payment methods (online						
transfer) are convenient						
7. Fast delivery of medication						
8. Package delivered in good						
condition						
9. Text messaging reminders						
are helpful to me						
12. Performance of the service	e personnel		-	1		
1 The staff gives detailed						
advice resulting in choosing						
the telemedicine service						
2. The staff are friendly and						
helpful						
3. The staff promptly answer						
questions when in doubt						
4. Doctors/nurses can easily						
communicate with me						
5. Doctors/nurses understand						
my concerns and provide						
clear advice						

Quality of the service		Leve	el of Satisfac	ction		
	Strongly Agree So-So Disagree Stron					
	agree				disagree	
6. Staff provide knowledge on						
all methods of contraception						
through the telemedicine						
service						

Section 4 Suggestions/additional comments

13. How likely are you to	recommend a to	elemedicine system	for in-person	pregnancy
termination for those in need?				

0 (3)	1	2	3	4	5	6	7	8	9	10		
\odot												
	14. Recommendations for improving the service.											

2. In-depth Interview guidelines

Semi-structured questions guideline for in-depth interviews

This questionnaire guideline is used for in-depth interviews with clients who used the telemedicine service for self-termination of pregnancy. There are three sets of questions. The total interview time should take about 30-45 minutes and is audio-recorded.

Question Set #1: History of experience with telemedicine.

- 1. Experience with the telemedicine service
- 1.1 Have you ever heard of a remote medical system for self-termination of pregnancy before? How did you hear about it, through which communication channel?
- 1.2 What is your reason for choosing a telemedicine service (e.g., it is a simple alternative, privacy, less stigma, don't want anyone to know, the woman can make the decision about her own body herself, etc.)
- 1.3 The reason you are not ready to have this pregnancy
- 1.4 Through which device did you access the telemedicine system?
- 1.5 Have you ever had experience receiving medical services remotely through a website or an application? If yes, how did you feel about that experience?
- 1.6 How effective do you think is telemedicine abortion? Are there risks? Are there potential side effects? Are there any other potential adverse impacts?
- 1.7 How did you feel about having to provide personal information as part of the screening process and evaluation of the treatment results through a telemedicine system?
- 1.8 Do you think identity verification in telemedicine system should take into account the privacy rights of the client?
- 1.9 What do you think about the exchange/sharing of client information between doctors, nurses, and related staff for termination of pregnancy? Do you think that potentially violates the rights of the client? How so?

- 1.10 What are the counseling channels used in the telemedicine system? Are they appropriate or not?
- 1.11 Is the payment method you chose suitable or not? How can it be improved?
- 1.12 In sending and receiving the medication, the name and address of the clinic and client may be revealed. Is that problematic? How can that be improved?
- 1.13 Should the clinic retain your treatment history in their database system and, if so, for how long?
- 1.14 How much should the service fee be? (Lower or higher than coming to the clinic by yourself?) Should the service fee be improved or not? How?
- 1.15 In what aspects are you satisfied with this service system?
- 1.16 What problems and obstacles did you encounter in using the telemedicine system?
- 1.17 What suggestions do you have for improving the system?
- 1.18 Do you think self-termination of pregnancy through telemedicine is a method that is suitable for you?

Question Set #2: Experience with the telemedicine service for abortion self-care

- 2. Service information and guidelines after self-service abortion
- 2.1 How many weeks pregnant were you when you used the drug to abort your pregnancy?
- 2.2 Can you calculate your gestational age? If so, how did you do that?
- 2.3 Was it convenient for you to get the ultrasound on your own, and send the result to the provider online? What is your opinion of that process?
- 2.4 Do you think that you can follow the doctor's orders correctly according to the treatment regimen? How so?
- 2.5 How do you feel about having medication abortion at home?
- 2.6 Were you able to successfully terminate your pregnancy via telemedicine? (i.e., Are you still pregnant?)

- 2.7 What methods did you use to confirm whether you are still pregnant or not after using medication abortion services, such as pregnancy test kits, ultrasound, etc.?
- 2.8 Did you have any side effects after using the drug to terminate your pregnancy? If so, specify:
- 2.8.1 What were your symptoms after taking the drug? Was there any bleeding? How long did the bleeding last?
- 2.8.2 Did you have fever, back pain, or other symptoms?
- 2.9 If you had side effects from taking the drug to terminate your pregnancy, did you go to the doctor or go to the hospital? Why/why not? If you saw a doctor, what treatment did you receive?
- 2.10 How did you take care of yourself after termination of pregnancy?
- 2.11 Did you have normal menstruation after termination of pregnancy?
- 2.12 Are you practicing family planning? Are you using effective birth control?

Question Set #3: Telemedicine service personnel.

- 3. Personnel service
- 3.1 How was the online counseling you received before, during, and after self-termination of abortion via telemedicine?
- 3.2 Did you receive any education after termination of pregnancy? If so, how was that done?
- 3.3 What additional information or knowledge should be given to the client?
- 3.4 How satisfied are you with the telemedicine for self-abortion service? What suggestions do you have to improve the service?



8 Soi vibhavadi-Rangsit 44, Vibhavadi-Rangsit Road, Ladyao, Chatuchak, Bangkok 10900

Tel. +66 2 941 2320 Fax. +66 2 561 5130 Email: info@ppat.or.th Website: www.ppatt.or.th Facebook: PPATBANGKOK Youtube: PPAT Channel



