

**DETERMINANTS OF DISCONTINUATION ON DMPA USE
AMONG REPRODUCTIVE AGE WOMEN IN DI LINH
DISTRICT, LAM DONG PROVINCE,
VIETNAM**



**A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF PRIMARY HEALTH CARE MANAGEMENT
FACULTY OF GRADUATE STUDIES
MAHIDOL UNIVERSITY**

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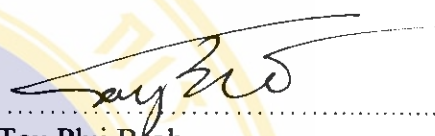
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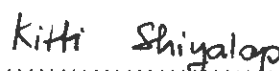
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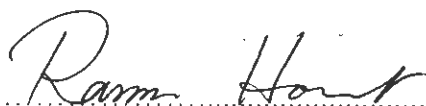
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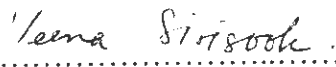
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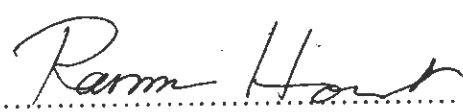
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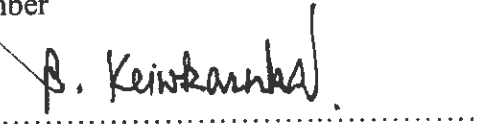
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Mul Loi

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ABSTRACT

The family planning program needs to provide a variety of reversible methods. The discontinuation and continuation of contraceptive methods are influenced by various factors such as intrinsic characteristics of the method, individual and social acceptability, provider's knowledge, clients' skills and attitudes, effective communication, appropriate delivery system and cost. This cross-sectional study was designed to examine the determinants of the discontinuation of Depot-Medroxyprogesterone Acetate (DMPA) use among married women in reproductive age in Di Linh district, Lam Dong province, Vietnam. Data used in the study are drawn from face to face interview of 280 discontinuers of DMPA use at 11 communes of Di Linh district. The findings revealed that the following variables were found the effect discontinuation, the respondents who having enough of living sons they tented to use for a long term of DMPA use, knowing about contraceptive practice, having a favorable attitude to DMPA use, having good access to health services, not having health problems during DMPA use, having strong reason to use DMPA were all conducive to continuation using long term of DMPA use.

Menstrual problems and side effects were cited as reasons for discontinuation in about 90 percent of cases. Over half of those who discontinued dislike injection and 40 percent found injection painful. Results of this study provide useful information for implementation to policy makers and planers regarding family planning program in rural areas.

KEY WORDS: MARRIED WOMEN / DMPA USE / DISCONTINUATION

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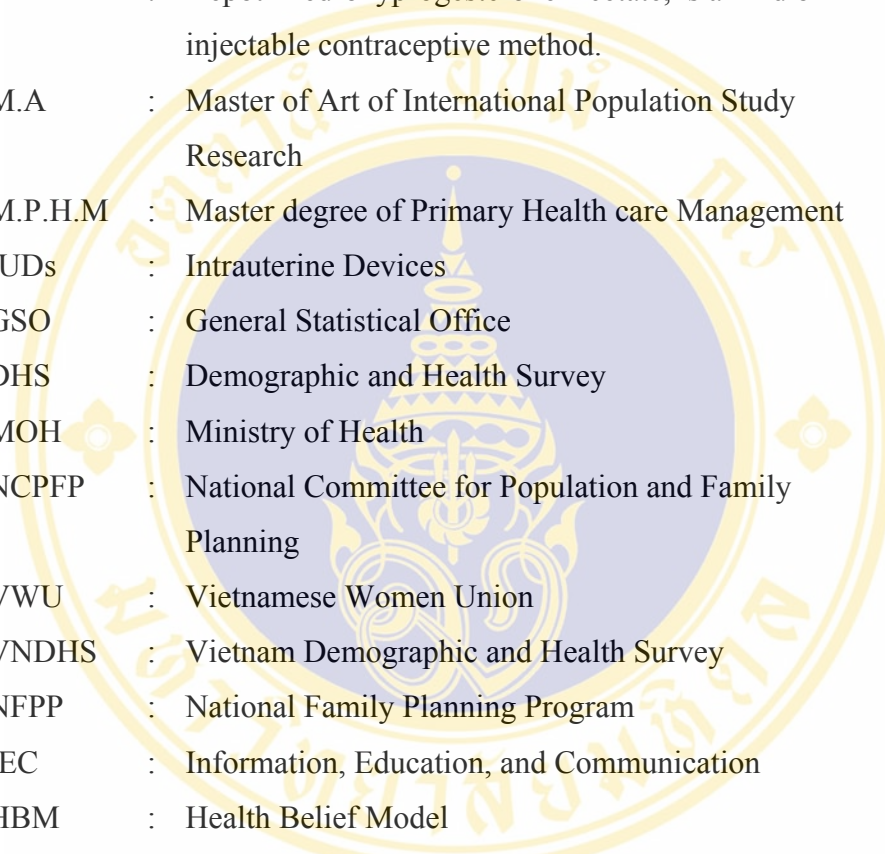
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LIST OF ABBREVIATIONS



WHO	: World Health Organization
DMPA	: Depot-Medroxyprogesterone Acetate, is a kind of injectable contraceptive method.
M.A	: Master of Art of International Population Study Research
M.P.H.M	: Master degree of Primary Health care Management
IUDs	: Intrauterine Devices
GSO	: General Statistical Office
DHS	: Demographic and Health Survey
MOH	: Ministry of Health
NCPFP	: National Committee for Population and Family Planning
VWU	: Vietnamese Women Union
VNDHS	: Vietnam Demographic and Health Survey
NFPP	: National Family Planning Program
IEC	: Information, Education, and Communication
HBM	: Health Belief Model
Cyclofem	: The name of monthly injectables contain estrogen and progestin.
Norplant	: is the registered trademark of The Population Council for levonogestrel sub dermal implant
FHI	: Family Health International

CHAPTER I

INTRODUCTION

1.1 Rationale and justification of the study

The rapid population growth has been creating obstacles in the way of all development aspects in many developing countries. Therefore, for the greatest interest of the nation we should concentrate our strategy to reduce the rapid growth of population as well as to change the social, political, economic and culture factors to increase the continuation of modern contraceptive methods among the married women of the reproductive age.

Contraception is the medical technology of fertility control tool, which can save the lives of women and children, improves the health of women and children and benefits of families and communities. In this sense, using contraception is a strategy that women themselves can adopt to protect their own health and family size.

Presently, worldwide, policy makers recognize the importance of contraceptive use to women's health. Family planning programs are an important measure contributing to the goal of reducing global population growth rate and promoting "health for all" in the coming years.

Vietnam is a developing country in South-East Asia with an area of 333,000 square kilometers. According to the Population Census in 1999, the total population of Vietnam was 76.59 million, an increase of nearly 12 million from the population census in 1989 (64.4 million). This makes Vietnam the second most populous nation in Southeast Asia and the fourteenth most populous country in the world.

Although the population growth rate of Vietnam has fallen in the last two decades, it is still at a high level. In 1989, the crude birth rate was around 31 per 1000 live births and the crude death rate around 8 per 1000, resulting in a growth rate of 2.2

percent per annum. The total fertility rate was around four children per women (Vietnam DHS, 1989). The high population growth rate has been the result of the high fertility and low mortality. A recent analysis of the Vietnamese population shows that the crude birth rate in 1999 was 25.3 per 1000 live births and the total fertility rate was 3.1 children per woman, Vietnam General Statistical Office, 1999 (1). According to the intercensal demographic survey in 2002, the crude birth rate was 20.89 per 1000 live births and the total fertility rate was 2.44 children per woman, Vietnam General Statistical Office, 2002 (2).

Many factors worked to bring down fertility from over six children per woman in the 1960s to a level of 3.8 in 1989, 3.1 in 1999 and 2.44 in 2002. The age at marriage among women has been increasing and, particularly, family planning is more strongly promoted by the government and abortion is legal and widely used.

In Vietnam, since the beginning of the family planning program in the early 1960s, family planning program has been considered one of the most important components of population development. The program has played an important role in slowing down the population growth rate. According to the intercensal demographic survey in 1999, the contraceptive prevalence rate was 65 percent, and more than two-thirds of these used a modern method. The modern contraceptive methods currently available include IUDs, oral pills, condoms, male and female sterilization, and injectable contraceptive methods. DMPA (Depot-medroxyprogesterone acetate) is one of injectable contraceptive method. DMPA is given every three months, it contains a progestin, similar to the natural hormone that a women's body makes. The hormone is released slowly into the bloodstream. Also, know as Depo-Provera®, Depo, and Megestron®.

Asia-Pacific Population Journal, Vol. 15, No. 4, an introductory study of DMPA contraceptive method in Viet Nam from the MOH, NCPFP and VWU managed it . The study was conducted between November 1995 and August 1998. As several clinical trials of DMPA had already been undertaken in Viet Nam, the project focused on strengthening service delivery capabilities, and research into use-behavior

and provider/client interactions. The goal of the study was to develop a strategy for DMPA introduction in Viet Nam within the context of broad method choice and improved quality of care for all family planning methods. The introductory study involved programmed interventions and research activities.

It is clear from Table 1, which shows the use of contraceptives in 2000, that injectable contraceptives are nearly absent. An increase in the use of modern and more effective contraceptive methods would reduce the reliance on abortion, and is a key concept in this research. In Di Linh district, the prevalence rate of injectable contraceptive use is higher than that in Vietnam. However, it is still at a lower level if compare with other methods in Di Linh district. In addition, in Vietnam, modern contraceptive methods such as IUD, condom, oral pill, sterilization, and injectable contraceptive method with high effectiveness, convenience for control fertilization have been strongly promoted by the government with free of charge and can manage its side effects at public service centers. Therefore, there is a need for family planning program to investigate the determinants of discontinuation of injectable contraception in order to provide appropriate information to policy-makers and planners.

Table 1 The breakdown of the used of contraceptive methods

Contraceptive method	Contraceptive Prevalence Rate	
	Vietnam	Di Linh District
IUD	41.7	38.48
Condom	5.8	10.06
Oral Pill	6.9	9.87
Sterilization: Female	5.7	5.18
Male	0.5	0.21
Injectable contraception	0.5	3.41
Others	1.6	10.69
Non use	27.3	22.10

Source: GSO, Intercensal demographic survey 1995-2000 Population Change and Family Planning surveys DHS (2), and Di Linh statistical office, 2002.

Studies on the injectable contraceptive date back to as early as 1963, WHO Bull, 1982 (3). In Vietnam, although injectable contraceptives were first introduced to Vietnam in the 1970s, it was limited to clinical studies in the central and provincial hospitals. Most investigators who carried out studies focused mainly on clinical aspects of injectable contraceptives. A study by Nguyen Thi Xiem and Le Thi Tinh (1982) of 244 women found that after two years follow-up, the discontinuation rate was 57.4 percent and the main reason for discontinuation was menstrual bleeding problems. According to Di Linh statistical office, the discontinuation rate was 20 % in 2002 and it was different of discontinuation rate with 6, 9, 12 months follow-up. Health conditions and sexual feelings were unchanged during the use of injectable contraceptives.

A recent study shows that the use rate was very low and that there has not been a follow-up to determine discontinuation related to side effects and general users' satisfaction. It is therefore important that there be major efforts to improve the service and broaden the injectable contraceptive choice by introducing long-acting

hormonal methods to the Vietnamese family planning program. It is also important to conduct studies on the determinants of discontinuation of injectable contraceptives in order to find out reasons for discontinuation, and the effect of socio-demographic factors, knowledge of family planning practice, attitude towards injectable contraceptive methods, and quality of health services on use behavior of Vietnamese women. The findings from such studies will assist planning and the introduction of this alternative contraceptive method in Vietnam, especially, in Di Linh district, Lam Dong province.

1.2 Research question

1.2.1 What are the determinants influencing the discontinuation of DMPA use?

1.3 Research objectives:

1.3.1 General objective:

To examine the determinants of the discontinuation of DMPA use among married women in reproductive age in Di Linh district, Lam Dong province, Vietnam.

1.3.2 Specific objectives:

1.3.2.1 To determine factors affecting the discontinuation of DMPA use among users.

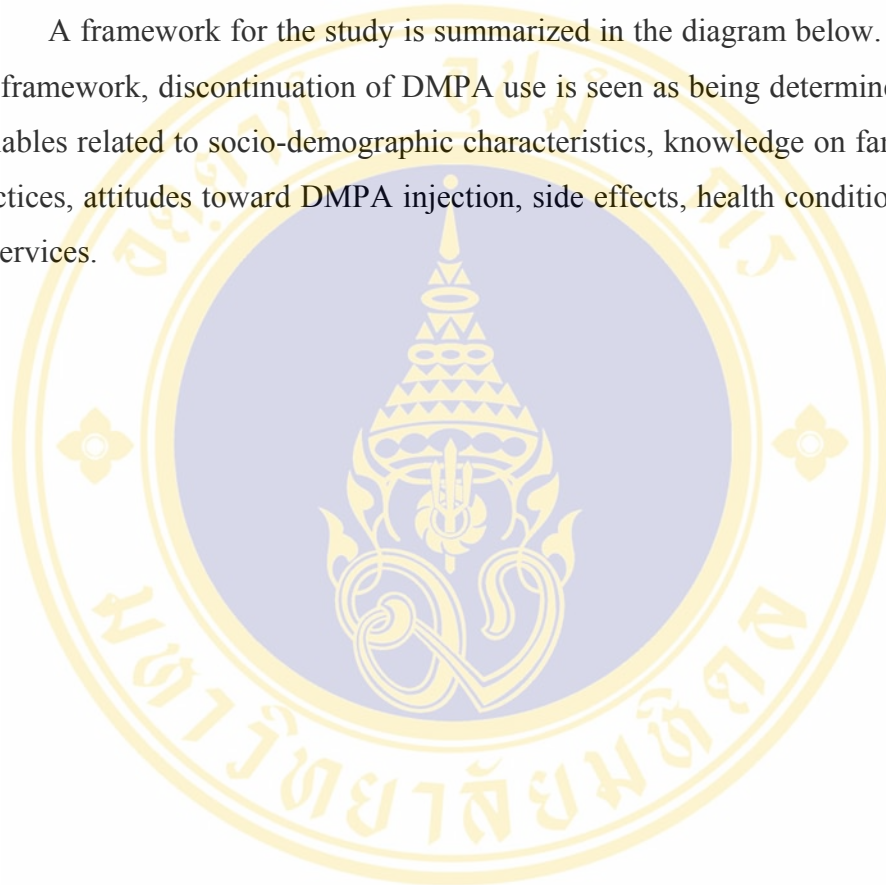
1.3.2.2 To investigate the effects of knowledge of contraceptive practices, attitudes toward DMPA injection and reasons for choose DMPA on the discontinuation of DMPA use.

1.3.2.3 To identify the quality of services on the discontinuation of DMPA use.

1.3.2.4 To analyze the effects of side effects, health conditions, and satisfaction with DMPA injection on the discontinuation of DMPA use.

1.4 Conceptual framework

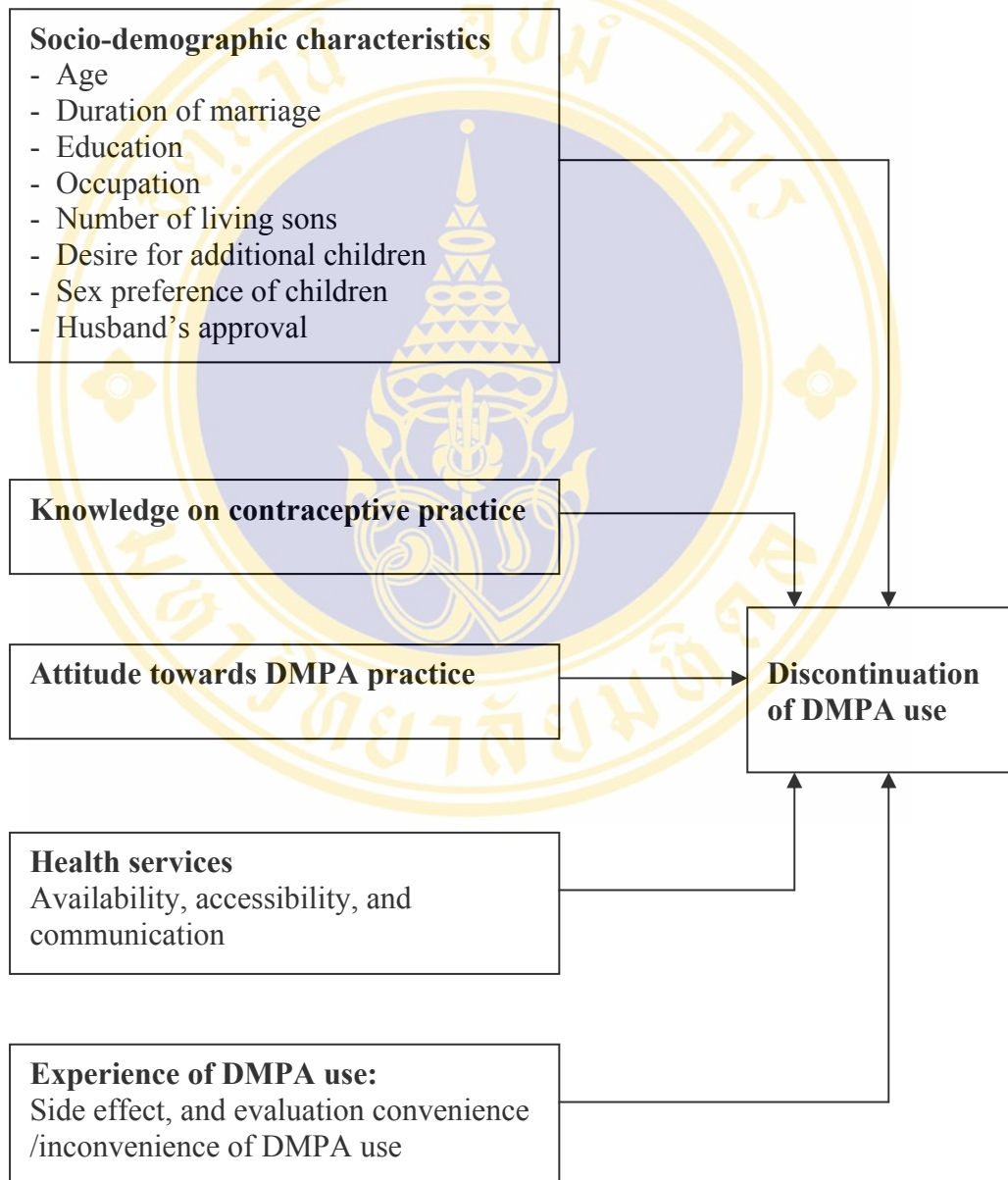
A framework for the study is summarized in the diagram below. According to the framework, discontinuation of DMPA use is seen as being determined by a set of variables related to socio-demographic characteristics, knowledge on family planning practices, attitudes toward DMPA injection, side effects, health condition and quality of services.



Conceptual framework

Independent variables

Dependent variable



1.5 Research hypothesis:

1.5.1 The likelihood of discontinuation will be higher for women who are young, have a shorter duration of marriage, small number of living sons and whose husbands disapprove of the method.

1.5.2 The likelihood of discontinuation will be higher for women who have more side effects, more dissatisfaction with sexual feelings, injection schedules and quality of services.

1.5.3 The likelihood of discontinuation will be lower for women who have a higher knowledge of family planning practices and more positive attitudes toward DMPA.

1.5.4 The likelihood of discontinuation will be lower for women who choose injectable contraceptives because of their dissatisfaction with other methods. But it will be higher for women who choose DMPA injection because of their physician's suggestions.

1.6 Operational definitions of variables

1.6.1 Dependent variable:

1.6.1.1 Discontinuation of using DMPA are defined as the women who discontinue after the shorter period of using DMPA method for whatever reason. It is divided into two categories such as short term, and long term.

1.6.1.1.1 Short term: refers to married women who used DMPA after 1 to 2 times of injection.

1.6.1.1.2 Long term: refers to married women who used DMPA after 3 or greater than three times of injection.

1.6.2 Independent variables:

1.6.2.1 Socio-demographic characteristics: descriptive term for respondent such as age, duration of marriage, education, occupation, number of living children, sex preference of children, desire for additional children, husband's approval.

1.6.2.1.1 Age: Refers to a number of years of married women since birth at the day of the survey. It is divided into two groups: 20 –29 years old, and 30 – 40 years old.

1.6.2.1.2 Duration of marriage: refers to a number of years of married women since they have been married up to the day of the survey. It is categorized into three groups: ≤ 5 years, 6 – 10 years, and > 10 years

1.6.2.1.3 Education level: refers to the level of education completion. This will be classified as no education, primary school, secondary school, high school.

1.6.2.1.4 Occupation level: occupation of the married women was classified into categories as farmer, government officer, worker, business and housewife.

1.6.2.1.5 Number of living sons: it is defined as the total of living sons of the married women at the time practicing of DMPA. Number of living son and number of living daughter.

1.6.2.1.6 Sex preference of children: refers to the considerations of the married women about the preferable sex of the child. It was grouped into three: boy group, girl group, and both boy and girl group.

1.6.2.1.7 Desire for additional children: preference of married women about the total number of children desire in their total reproductive period. It was measured into two groups: less than or equal 2 children, and equal or more than 3 children.

1.6.2.1.8 Husband's approval: mean the approval and facilitating of husband for the women to practice contraceptive methods as perennial by the subjects. It is divided into two categorizes with answer "Yes" or "No".

1.6.2.2 Knowledge on contraceptive practices: means understanding of the respondent about contraception in general. The general of knowledge measure

are in type, principle, indication, effectiveness, correct intake, common side effects, and source of availability of common contraception. The knowledge is classified into three categories, good knowledge, fair knowledge, and poor knowledge.

1.6.2.3 Attitude towards DMPA method: means positive or negative evaluation or feeling towards contraceptives by the respondents. It was measured by Likert's scale of five grades: strongly disagree, disagree, not sure, agree and strongly agree. The score is graded into two groups: positive attitude, and negative attitude. Positive attitude, if its score equal or more than "mean + SD" value. Negative attitude, if its score less than "mean + SD" value.

1.6.2.4 Health services:

1.6.2.4.1 Availability is referred to the available service center and health personnel regarding family planning services.

1.6.2.4.2 Accessibility is referred to the proximity of the place of service in term of traveling distance from the residence of the married women to the service center and the transportation facilities for getting DMPA contraception.

1.6.2.4.3 Communication: refers to the source information for using DMPA methods, informativeness as well as the communication between respondents and health providers. Informativeness, it refers to the doctor and health personnel provide clear and sufficient explanation regarding health problem and treatment.

1.6.2.5 Experience of DMPA use:

1.6.2.5.1 Side-effect: The effects of DMPA, not necessarily harmful, produced by diagnostic: change in menstrual bleeding, amenorrhea, may cause weight gain, headaches, sleeplessness, weakness, nausea, less sex driver. Those are classified into three groups: severe, moderate, and little or none.

1.6.2.5.3 Evaluation convenience of DMPA use means the evaluation of respondents about DMPA use in terms of sexual desire, sexual feeling, convenience and inconvenience of DMPA use and future intention about DMPA.

1.7 Limitation of the study

Women were recruited into the study with limited knowledge about injectable contraceptive method from collaborators of Committee for population, family and children through local networking, where discontinuation did occur, therefore, there is a possibility that women will state that they discontinued for medical reasons. Further, this study was conducted in rural areas of Di Linh district and completed information from minority group (K'Ho ethnic people), therefore, the understand of them about questionnaire quite difficult because of languages. This lead to incorrect when evaluate the score of knowledge and attitude toward DMPA injection as well as where the transportation condition was very difficult to access to health services, the respondent will state they discontinue because of that. In addition, many factors are related to the discontinuation of using contraceptive methods. This study can not cover all factors, only focuses on some important factors, it was summarized in the conceptual framework above.

CHAPTER II

LITERATURE REVIEW

Many researches have been done under the support from WHO revealed that the personal factors that enter into individual's decision concerning choice of contraceptive method include age, parity, age of youngest child, reproductive intentions spacing or terminating childbearing, frequency of intercourse, relationship with partner, influence of other in decision-making process, importance of method convenience, and user's familiarity and level of comfortable with her or his body and reproductive system. WHO, contraceptive method mix: guideline for policy and service delivery. 1994 (4).

Contraceptive practices in developing countries have been influenced by the availability of contraception as well as a myriad of cultural, societal and economic characteristics. Variation in current contraceptive use was not consistently attributed to family size preferences, child loss, ethnic, religious and urban-rural differences. However, differences by age of the women, parity and women's education were universally observed.

Hall E. Peter and WHO Task Force 1994(5). A study in Indonesia among the nearly 1,700 women granted their method choice, 9 percent had discontinued contraceptive use a year later. Among the 266 women who did not get their first choice, 72 percent were not using the method a year later.

In Vietnam, current use of contraception was more prevalent among the more highly educated, urban women over the age of thirty with two or more children, as well as certain development characteristics of the community, influence current use of modern method of contraception such as the oral contraception and condom. Specific characteristics of the family planning services available to the women were also examined, Thang Nguyen Minh, 1992.

2.1 Socio-economic, demographic factors

2.1.1 Age of the women

The age of the women is an important factor in increasing growth rate. Early marriage and late marriage are associated with low and high fertility. In both early and late married women, the acceptance of contraceptive play a vital role for low fertility. A major health and social concern is the high adolescent fertility generally has adverse effects on the health of teen-age mother and their infants. Further more, early motherhood is often related to higher subsequent fertility. Late marriage encourages women to make decisions about childbearing. It is found in many studies, United Nation, 1992.

The study in Thailand found that the relationship between age and contraceptive use took inverted U-shape; that is the promotion of women using modern methods varied with age, reaching peak among those in their 30s and declining thereafter. The need of contraceptive methods was considerably reduced with increasing age, therefore, the proportions using the methods were likely to decline, Leoprapi Boonlert and Varachai Thong Thai, a study of family planning incentive program in Thailand, 1989 (8).

A study by Chamrathirong and Stephen, 1986 (33) indicated that various factors influence contraceptive method choice; these factors include socio-economic and demographic factors including age, urban rural residence, education.

Krueger et al, 1994 (10) reported in an analysis of 1,882 Asian acceptors of Norplant, that there were significant differences in mean age between continuers and discontinuers. Women who discontinued were generally younger than women who completed 5 years of use. A study of the acceptability of the injectable contraceptive among 2,252 Egyptian women from difference localities found that the promotion of women who discontinued in the first year was 36.2 percent (Hassan et al, 1994). The most important correlations of discontinuation were young age.

Kane et al 1990. An analysis of 2,586 potential acceptors of Norplant interviewed at 10 family planning clinics in Bangladesh, Haiti, Nepal and Nigeria found strong impacts of socio-demographic factors such as age. For example, In Haiti, only the age of the women was significantly associated with discontinuation/continuation in contraceptive choice.

In Vietnam, the marriage and family law of 1960 stipulated that the minimum legal age at marriage was 18 for women and 20 for men. Family planning program of Vietnam in 1982 as in prior years emphasized late marriage, late first birth, known as “the three lattes”

2.1.2 Duration of marriage of women

Studies investigating the duration of marriage of women realized that the most women who wanted no more children had been married for ten years of marriage and had already the number of children they desired. On the other hand, women with longer duration of marriage generally desired larger family's size than those who married for short time. In a study related to family size in Taiwan during 1961-1976, and knowledge, attitude and practice of family planning in Thailand (Koju Ram B, 1995) indicated that marriage duration affects the number of children desired. The results of this survey show different marriage duration for each group of women. For example, the average desire for family size of women who had five to nine years of marriage 3.1 while for women had been married for over ten years the desired family size was 3.3. The data indicated that women who had longer marriage duration had larger family than those who had shorter marriage duration

Vu Thi Thanh Huyen, 1995 (46). Study in determinants of continuation of injectable contraceptive in North of Vietnam show that the continuers and discontinuers were very similar with regards to most socio-demographic characteristics. On average, women in both groups have been married for about 10 years; have about 2 living children and about 1 living son

2.1.3 Education and contraceptive methods

Education is an important factor for acceptance of contraception. Usually the educated women have more awareness and opportunities to know the importance of contraceptive in respect of birth control. In accordance with the many studies there is positive relationship between education and contraceptive use especially studied in El Salvador, England and the Philippines have shown this relationship, Ferguson and MC Can 1976, referred from Pogado Laput, R 1990 (12).

In most countries the better the education the women had obtained, the more likely they were to use contraceptives, Aytal Haque, 1996 (13). Factors affecting the acceptance of contraceptive among married women. Part of the relationship between education and contraceptive use may be due to the facts that educated women tended to live in the urban areas where family planning services are more easily available. However, education made no difference in the choice of modern method over a traditional one. While well-educated women were more likely than less educated women to use a traditional method were. Survey also found that when the husband was well educated, the couple was more likely to practice contraception regardless of the wife's level of education, Sisouphanthong B, and editor. Report on fertility and birth spacing survey in Lao PDR, Virasask Banouyong, 1999 (14).

An analysis of 2,586 potential acceptors of Norplant interviewed at 10 family planning clinics in Bangladesh, Haiti, Nepal and Nigeria (Kane et al 1990) found strong impacts of socio-demographic factors such as education of married women to the women's interest in accepting Norplant. For example, In Bangladesh and Nepal, illiterate women were more likely to be interested in trying Norplant than were women with some education, while in Haiti, women with a higher level of education were more interested in the method. Overall, the results of this study indicated that where the status of women is low, are important determinants of female interest in using contraception.

Krueger et al, 1994 (10) reported in an analysis of 1,882 Asian acceptors of Norplant. Educational attainment of non-completers was slightly higher than for

completers, and non-completers had a significantly lower mean number of living children.

Another study by Petta et al, 1994 (15) on the reasons for discontinuing IUDs use, found that having no education or living in rural areas was associated with an increased risk of discontinuation. Effective and regular counseling about IUD use, especially among illiterate women, may help prevent IUD discontinuation.

Tran Van Phuong study of factors related to the married women practicing permanent contraceptive methods 1996 (16) shown that education generally exerted a negative influence on fertility but not globally

Education attainment is well-established indicator of socio-economic status of women and an important factors-affecting decline in fertility. Studies in several countries have showed that fertility and family planning are influenced by women's education. Referred from Abuka, I.M. 1991 (17)

In Vietnam, the most striking difference in the prevalence of contraceptive use was between the women who have no formal education and those who had a primary or higher level education. The fact that the majority of women in Vietnam have at least a primary education may support family planning efforts. The almost universal literacy rate among women makes it more likely that women can benefits of family planning to space pregnancy as well as the economic benefits of smaller family Thang Nguyen Minh, 1992.

2.1.4 Occupation of married women

Leopapai B, 1985 (8). Showed in contraceptive prevalence survey report that although the highest percentages of married women currently practicing contraception were in the professional and in the sales and business categories, the percentages of women in other occupation groups currently practicing contraceptive were also in the range of 70 or higher, indicating that influence of this factor on contraceptive is dissipating. The lowest contraceptive prevalence rates were among

those who were not working and housewife. There was still positive relationship between women labor force and participation and contraception.

A cross-national study by WHO (1980) in India, Korea, the Philippines and Turkey reveals that women who selected the injectable contraceptive did so primarily because of its convenience, high effectiveness and ease of change to other methods. In general, there were more women in rural areas choosing DMPA than those in urban areas.

The study of Khin WT. Determinants of contraceptive use in rural Myanmar, 1995 (18), it was found that women who worked outside their home used contraceptives more and had lower fertility than women who did not work outside their home, and who were engaged in agricultural and non-agricultural occupations were 28 and 24 percent, respectively less likely to use contraception than those women who did not work. This was due to their long working hours without extra time to visit source of contraceptives.

In a recent study conducted in Kinsasa focused on the importance of women's employment on their contraceptive behavior. The finding indicated that, after controlling other factors, women who were employed, i.e. Self employed or working for employers, were likely to practice a method of contraceptive than those women who were not employed, the likelihood of contraceptive practice being greatest for employees, Shapiro. D and B.O Tambasha, 1994 (19). Women's employment education contraceptive and abortion rate in Kinsasa.

2.1.5 Number of living children

There is a positive relationship between the number of living children and contraceptive practice. The number of living children determines the contraceptive practice. Those who do not want more children are more likely to choose reliable methods. Sumapraja, 1982 (20).

In accordance with Djoehraeni R.H, 1990 (21) among currently married women aged 15-44 who had two living children, nearly 65 % wanted no more, 55 % of those with no son wanted more, and 85% of women with two sons wanted no more, but 72 % of those with a son and a daughter were more likely to practice contraception than women with two children with the same sex. (66 % of those with 2 sons and 63 % of those with 2 daughters). Amount of 84 % of married women with three children said they wanted no more and these two-thirds of such women used contraception.

Krueger et al, 1994 (10) reported in an analysis of 1,882 Asian acceptors of Norplant indicated that desired pregnancy was the most common reason for early discontinuation.

Riley et al, 1994 (22) investigated the determinants of first injectable contraceptive (DMPA) use for 220 rural Bangladeshi women who were first time users. The results were that women with high parity, for example, having many children, or using the method longer than women of low parity

Toan Nguyen Van et al, utilization of reproductive health services in mountainous area in Vietnam 1996 (23) are there equal opportunities to plan and protect pregnancies during five-year period (1987-1992). They concluded that 67.7 % of the women used contraceptive methods, with the intrauterine device (IUD) being the most common. The use of IUDs was positively associated with the number of living children but not with other socio-demographic factors in mothers.

2.1.6 Sex preference of children

Through analyzing demographic health survey data from 57 countries, Arnold, F., 1991 (24). Sex preference for children and its demographic and health implications, showed that a son preference remains strong in South Asia countries. In that area, Bangladesh has the highest ratio of preference for sons over daughters. However, by analyzing data from a cohort study in Pakistan, Nepal, South Korea and

other countries showed that the sex of serving children is associated with subsequent fertility and contraceptive behavior.

Cultural background may influence attitude towards of certain methods of contraception, married couple desire to have a balance between the number of sons and daughters. The preference of couples that have one son and one daughter has been appropriated to population policy and family planning. A study by Blende, 1990 (7) in India found that ethnic variables (religion and mother tongue), number of children, especially of sons were important determinants of acceptance and method choice.

Vietnam is a country that is suffering from centuries of feudal customs and traditional practices that effect family planning behavior. Although the government has adopted appropriate policies such as motivating the masses to practice family planning and decreeing equal status for women, these customs and practice could not be altered overnight. While behavior may be temporarily changed, values, norms, and attitude remain. Thus many Vietnamese still hold on pronatalist ideas such as “the elephant has been born to the earth; the earth has to give grass to it”. Son preference persists, particularly in rural areas with deep-rooted belief such as “one son is worth 10 daughters”. Many women who have more than two daughters but no son still want to have a son thereby hampering the goal of population growth reduction. Son preferences appear to be weakening in Vietnam, it still affect contraceptive use. Having is important for Vietnamese in order to maintain the family line and as a source of support for parents in old age, Simon N, family planning in Vietnam. A study in 1995, on son preference in Vietnam suggests that if son preference were absent the fertility rate would be approximately 10 % lower.

The Vietnam population-family planning committee in 1988 indicates that ones of the reasons for increased population size is the fertility behavior of the Vietnamese, especially those who in rural areas. Couples who live in rural areas always wish to have a large number of children with at least one son. A survey conducted by Institute of Social Sciences in 1990 noticed that women in some provinces were asked how many children they want. There was about 52 % wanted

three children with at least one son. A son is very important to the Vietnamese, and some couples continue their fertility until they have a son, Thang Nguyen Minh, 2001 (25). Contraceptive use in Vietnam: the effect of individual and community characteristics.

2.1.7 Desire for additional children

Prachurabmoh, V. et al, preference for son. Desire for additional children and family planning in Thailand. Journal of marriage and family. No. 36 1989 revealed that wanting more children decreased with increases of number of living children. It occurs because once the desired family size has been attained, the desire for more children ceases.

Se Youry, 1996 (26), knowledge, attitude, practice of family planning among married women of reproductive age at Sangker district, Battambang province Cambodia in 1996 concluded that the desire for future pregnancy was the leading cause for women for these reason. The cumulative terminating rates for planning pregnancy for the first, second, third, fourth and fifth year were respectively 0.34 %, 4%, 5.1 %, 8.0 % and 9.2 %.

Syed Ihtram Shabbir. Acceptance of contraceptive among women reproductive age in Putthamonthon district, Nakhon Pathom province, Thailand, 2000 and Phillip J.F (27), continued use of contraception among Philippine family planning acceptors 1978 revealed that the desire for additional children at the time of acceptance does not appear to have an important influence upon continuation. Decision to stop using contraception seems to be more a consequence of inconvenience, side effects and anxieties about methods than conscious decisions to plan to have children. Concluded that the desire for more children of course, affects contraceptive practice in the Philippines. Those who said they wanted more children are less likely than those who said they did not to continued contraceptive practice and they tended to use contraceptive less effectively. However, the differences are not very great. It is interesting to note that those who said they wanted to have more children showed lower conception rate when unprotected than those who said did not.

This finding may indicate that those who want no more children tend to be more fecund but it may also reflect a tendency for those who are pregnant or have recently delivered to say they want no more children. As the open birth interval increases, some of these women may change their minds and decide they want to have another child after all.

2.1.8 Husband's approval

Husband's approval plays an important role in the practice of contraception. Syed Ihtam Shabbir, 2000 (27) study acceptance of contraceptive among married women in reproductive age in Thailand and revealed that the women in the group who did not have their husband's approval had very low contraceptive use rate (32.2 % at 12 months compared with 56.6 of the other group).

Riley et al, 1994 (22) investigated the determinants of first injectable contraceptive (DMPA) use for 220 rural Bangladeshi women who were first time users. The results were that women whose husbands approved of family planning had significantly longer use duration than those whose husbands disapproved of it. Respondents who adopted the injectable contraceptive because of perceived positive aspects of the method used it longer than those who chose it for other reasons

Mohammad R, Joesoef et al, 1988. Husband's approval of contraceptive use in metropolitan in Indonesia: a multivariate analysis, studies in family planning, investigated the effect of the number of living children decided by their husband's approval. They found that the effect of number of living children on contraceptive use was much stronger for women whose husbands approved than for women whose husbands did not approve of using contraceptive.

Their husband's and/or other members of the families, Fergusson AG fertility rate and contraceptive adaptation and discontinuation in rural Kenyan studies in family planning show influence women's options that 17.8 % of respondent discontinued using contraception because their husband wanted children or forced discontinuation. A study concluded that of the interpersonal sources explored the most

influential is the husband. Women whose husbands had spoken to them about family planning had higher continuation rates, 67 % than those whose husbands had not, 60 % only, Milan Lopchan, factors effecting the continuation of temporary contraceptive practice among married women of reproductive age in Thailand (29).

2.2 Knowledge, attitude and practice of contraceptive methods

Remarkable progress has also made in extending the knowledge and means of family planning. In three decades, the number of children born to the average women in the developing countries fell from 6.0 to 3,7 overall. The proportion of women using modern methods of family planning has increased from less than 10 % to approximately 50 % (WHO, 1992). The speed of this change is unprecedented in demographic history, with some 17 nations succeeding in having lower fertility rates in only one generation (United Nations, 1992). Success and failure in contraceptive methods is dependent on how much one knows about contraceptive methods. On the other hand, it cannot be assumed that awareness of contraceptive methods will necessarily guarantee that she will accept it use. Knowledge of outlets is correlated with the type of contraceptive use. Women who know about the outlets are less likely to use traditional methods.

Knowledge and attitude are related to the acceptance and practice of contraceptive. A woman must have at least some knowledge about certain contraceptive methods and the source where she can obtain service before she can acquire it for use. Without such knowledge, it is almost impossible for a person to use it. The knowledge of contraceptive methods, therefore, is an important factor that determines whether women will decide to limit childbearing. Syed Ihtram Shabbir, 2000 (27).

The Vietnam demographic and health survey in 1988 (30) showed that knowledge of at least some methods of contraceptive is high 74 % of both ever-married and currently married women are aware of at least one modern contraceptive method. Knowledge of IUD is very widespread, followed by abortion, female

sterilization, and menstrual regulation. Less than half of the women know about the pill or injectable method, and a similar number of rhythm and withdrawal. There are, however, important differentials. Urban, educated women are more aware of modern methods than rural, illiterate women are. There are also important regional differences among women in the south being more aware of the pill, condoms, and female sterilization than women in the North are. There are also significant differences concerning knowledge of these methods depending on education level. The comprehensive knowledge and understanding of what and how different socio-demographic and behavioral factors affect the decision of individuals and couples to practice of contraceptive methods, Dang Nguyen Hai, 2001 (31).

The study of Doan Duc Luu, contraceptive use patterns in central cost area of Vietnam, 1995 (32) found that Vietnamese women's knowledge of contraceptive methods was relatively high, and that urban women's knowledge was higher when compared to rural women's knowledge. There was still a big gap between knowledge and practice regarding contraceptive use.

2.3 Health services

2.3.1 Availability Health and accessibility

2.3.1.1 Distance of contraceptive service

A study concluded that over 95 % of people in the developing countries lived in countries that directly supported family planning programs. The average distances that women must travel to their nearest clinic providing contraceptive service varied really, women had much better access to contraceptive services in urban areas than rural areas. Chamrathirong A, contraceptive practice and fertility in Thailand, 1986 (33).

Accessibility of Family Planning Services Overall, 73% of currently married women interviewed in the 1998 VNDHS lived within one kilometer of a facility providing family planning services; this percentage was 27 percentage points higher in urban areas (95%) than in rural areas (68%). However, the proportion of women

using modern methods in urban areas was similar to that in rural areas (54% and 56%, respectively), as was the proportion with unmet need (7% and 9%). Project provinces were similar to no project provinces on most measures; the only notable difference was in the proportion of women living within one kilometer of a facility-based provider (60% vs. 78%).

A study by Ashakul. T and P. Richardson, 1990 (6) on the contraceptive use of women in municipal and non-municipal areas of Thailand revealed that when costs, travel and waiting time increased, the use rate decreased

According to the NFPP, Leoprapai B, contraceptive practice of Thai women 1987 (8) women were willing to travel long distances. The majority of pill clients took less than 30 minutes to reach the service facility but a large percentage took about half an hour. However, the IUDs cases had a greater proportion of urban clients and showed a very similar 12-month continuation for less than 30 minutes of travel time, Aytal Haque, 1996 (13). Factors affecting the acceptance of contraceptives among married women of reproductive age in Thailand.

2.3.2 Communication in contraceptive use

A study in Peru, 1996 (34) by the New York-based Population Council surveyed 112 women who used the three-month injectable, depot-medroxyprogesterone acetate (DMPA), and 38 women who had discontinued the method, to learn why discontinuation rates were high. Researchers found that women did not receive sufficient information about how the method works. In addition, many women were reluctant saying my business out loud."

In Thailand, the private personal communication between husband and wives, relatives and medical personnel was the major means of communicating information about contraceptive methods, Charoenloet Vand. Report on contraceptive continuation rate and use effectiveness in Bangkok, Thailand, 1976, a study conducted on community-based factors affecting contraceptive use pattern and discontinuation among Thai women found out that in southern Thailand, information

seeking behavior first begin with the member of the women's kinship group i.e. Mother, sister, and cousin who have experience in using contraceptive methods. Then, information seeking is extended to significant con-societies found within peer group and neighbors. Through these networks, local beliefs, concerning contraceptive use and discontinuation are most effectively transmitted community-based factors affecting contraceptive use pattern and discontinuation, Htay Win, factor affecting family planning behavior among married women of reproductive age in Thailand, 1993 (35).

A study on husband-wife communication and practice of family planning, Luechai Chulasai, the role of husband and fathers in family planning in rural Chiang Mai, Thailand, 1990 (36) found that the communication effort of the family planning program, either through personal contact or media or both, had a direct impact in promoting family planning adoption.

Personal who had the most contact with the information of the program tended to be adopters. On the other hand, those who had none, tended not to be adopters. The finding also indicated that direct effect of mass media was much smaller than direct personal contact. However, mass media contact tended to stimulate personal contacts, promoted husband-wife communication and discussion with indirectly promoted adoption of family planning service. Consequently, husband-wife communication should be stimulated further personnel, because of mass media messages, and information discussion with friends, neighbors and relatives, Jain A, 2001 (37).

The study done by Shafikul S.M Islam et al, influence of selected socio-demographic and economic variables on fertility in Bangladesh 1995 (38) revealed that, if women access to modern objects in the house such as radio and television, their fertility is likely to be lower than those who do not have these modern objects personnel course of communication and motivation, face to face interaction between client and provider is one of the most crucial aspect of the information education communication (IEC) process. Good counseling encourages open communication between clients who did not decided on a specific methods may seek information and

advice from the provider. Face-to-face communication and motivation is the most effectiveness of IEC approach in family planning.

IEC support to family planning service delivery as strengthened and leads to positive attitude towards family planning to promote the practice and acceptance of a small, healthy, happy and prosperous family as a social norm by adequate provision of information on population, development and family planning methods and by mobilization of every member of community to voluntary participate in the population and family planning program with a view to achieving the general population objective of the country, Simons N. family planning in Vietnam, Asia research center, Australia 2001 (38).

2.3.3 Quality of services

A study by Johns Hopkins University, by Kim et al, 1994 In Ghana, surveyed 49 new clients and 48 continuing clients and found that the majority of health workers greeted clients, treated them kindly, corrected misconceptions, and explained why a method might be inappropriate. However, workers seldom discussed side effects were the most common reason given by women in The Gambia effects. In Niger and The Gambia, more than 30 percent of 1,200 women interviewed stopped using contraception within a year. Side effect were the most common reason given by women in the Gambia and the second most common reason for discontinuation in Niger, Cotton N et al, 1992 (40).

Numerous studies have shown that, while well intentioned, providers often give incomplete information during counseling sessions. A study in Peru, 1996 (34) by the New York-based Population Council surveyed 112 women who used the three-month injectable, depot-medroxyprogesterone acetate (DMPA), and 38 women who had discontinued the method, to learn why discontinuation rates were high. Researchers found that women did not receive sufficient information about how the method works. In addition, many women were reluctant to ask questions if they did not understand what providers told them. "I would like to ask questions," said one client, "but the nurses are always hurried, and what is more, there are many people,

and it makes me feel ashamed to be asking questions and saying my business out loud."

In Nigeria, 1992 (40) a nationwide study found that in 395 client-provider interactions, nearly all clients said health center personnel were friendly and easy to understand. However, clients did not always receive the information necessary to help them use their method correctly.

Quality of services can dramatically affect the use of family planning. A study in Peru, 1996 (34), for example, estimated that contraceptive use would rise from 16 percent to 23 percent if all women lived where programs provided the highest quality of care, compared to living where programs provide the lowest quality of care. In general, the study found that rural areas had both lower quality and lower contraceptive use than urban areas. The study analyzed services at nearly 3,000 delivery points, measuring quality by such factors as method availability and restrictions, provider training, provider bias, information provided, cleanliness, privacy and interpersonal relations, and other reproductive services provided.

In a recent study of about 600 Vietnamese DMPA users, counseling influenced whether women experiencing amenorrhea continued using DMPA. "Women who continued use reported receiving better quantity and quality of advice from health staff, as well as from other satisfied users, families or husbands," says Dr. Maxine Whittaker, an Australian-based physician and technical advisor to the Vietnamese study that was funded in part by WHO . Cuong DT, My Huong NT, 1996 (41).

2.3.4 Health personnel who provide service (doctor, nurse, midwife)

Djoechaeni, Siti R.H. Study continuation rate of oral pill use among rural eligible women in Thailand and Varakamin et al, 1983 (21). Studied about the safety and effectiveness of the use of trained auxiliary midwives to prescribe oral contraceptive, using a simple checklist to rule out contraindications. During the one-year study, there was a dramatic increase in acceptance with no increase in side effect

or complications noted at the time of a one-year follow-up study. The continuation rates were high for 12 months; particularly so when the initial prescription was made by auxiliary midwives (75 % after prescription by a midwife as compare to 66 % after the physician's prescription), although the differences were not statistically significant. In the same manner, a pilot study was initiated to evaluate the effectiveness and safety of use the auxiliary midwives to provide DMPA injection. In the study, approximately 5,000 women accepted DMPA; 3,150 received the injection, from physician.

2.4 Side effects and health condition of users

Wan Fook Kee, 1975 (42) in a study of an oral pill reported seven categories of reasons for termination of the method given by the majority of discontinued users. The most common reasons among these were planned pregnancy and side effects (about 21 percent of all terminations). Among the side-effect related reasons, the most common were menstrual disturbances, weakness, dizziness, changes in skin pigmentation and hair loss.

An FHI 1996, study of 1,076 clients at four clinics in Kenya, for example, found 80 percent of clients discontinued pills after 12 months, as did 39 percent of DMPA users and 20 percent of intrauterine device (IUD) acceptors. Clients said they were satisfied with clinic services but unhappy with side effects. In FHI's Women's Studies Project, the majority of 490 women interviewed in Indonesia said they received the contraceptive method they wanted when they went to clinics. However, three-quarters of women in Jakarta and Ujung Pandang said they wanted more information about side effects to help them decide.

In addition, amenorrhea, one of the side effects of DMPA, was disconcerting to women. In spite of assurances from providers that amenorrhea was not harmful, women viewed menstruation as beneficial to their health. Some women even skipped injections so their periods would start and they would know they were not pregnant. Many feared amenorrhea was a sign of permanent infertility.

Riley et al, 1994 (22) investigated the determinants of first injectable contraceptive (DMPA) use for 220 rural Bangladeshi women who were first time users. Those who experienced side effects had shorter use duration than those who did not experience side effects, and those who cited heavy bleeding as their main problem discontinued use the earliest.

Pilot studies on the introduction of injectable contraceptive (cyclofem) into family planning programs have been undertaken in Indonesia, Jamaica, Mexico, Thailand and Tunisia (Hall,1994) (5) with a total sample of 7,927 women. The pilot studies confirmed the high efficiency of this method, with 12 months pregnancy rates ranging from zero to 0.7 percent. The overall 12 months discontinuation rates were high but different in each country, 33.5 percent for Indonesia, 40.4 percent for Jamaica, 58.5 percent for Thailand, 71.4 percent for Mexico, and 71.8 percent for Tunisia. The main medical reasons for discontinuation were bleeding and amenorrhea. For instance, in Tunisia more than 30 percent of the 144 women who discontinued did so because of bleeding-related reasons immediately after the first injection. Discontinuation for this reason was also high in Thailand, but for Indonesia and Jamaica, the rates were lower.

A study of the injectable contraceptive among 2,252 Egyptian women from difference localities found that the promotion of women who discontinued in the first year was 36.2 percent (Hassan et al, 1994) (11). The most important correlations of discontinuation were frequently reported side effects. However, continuers appeared to have more tolerance to side effects. The main side effect cited as a reason for discontinuation was menstrual irregularity, with about 41.9 percent giving this reason, about the same level as that found in the pilot study in the five countries cited above. A significantly higher proportion of continuers than the discontinuers received counseling prior to injectable contraceptive use.

Discontinuation rates due to DMPA-associated menstrual disturbances are approximately 25 percent after one year. However, in a WHO trial (43, 44), the percentage of women who discontinued after one year due to bleeding varied widely

among seven countries: from 3.5 percent in Jamaica to almost 59 percent in Yugoslavia. This may be due, in part, to cultural differences in the acceptability of bleeding disturbances. In addition, population variations have been observed in studies of progestin-only injectable. Thai women, for example, absorb and eliminate DMPA more rapidly than do Mexican women. In addition, in a study of DMPA use by Vietnamese women, the percentage of DMPA users with a normal menstrual pattern was two to three times higher than reported in previous DMPA studies in various other populations, probably due to ethnic differences in the agent's metabolism.

A study by Nguyen Ngoc Toan, Nguyen Thi Xiem and Nguyen Thi Thanh (1984) on 300 women found a discontinuation rate of 53 percent after 1 year and 73.3 percent after two years. The main reasons for discontinuation were amenorrhea and prolonged bleeding. However, in cases where staff explained clearly the possible side effects before acceptance, these reasons were of minor importance.

In a WHO study(1994) (5) in which Cyclofem was introduced into family planning programs in Indonesia, Jamaica, Mexico, Thailand and Tunisia and given to about 8,000 women, discontinuation rates associated with menstrual disturbances at one year ranged from about 3 percent in Indonesia to about 40 percent in Tunisia. Different cultural attitudes about disturbances may be among reasons why discontinuation rates vary so widely.

A study of Johansson, Lap Nguyen The, Hoa Hoang Thi, population policy, son preference and the use of IUDs in the north of Vietnam, 1998 (39), found that contraceptive use and discontinuation among women in the north of Vietnam, in a context of a strong culture preference for sons and stringent two children policy, overall discontinuation rates were high, nearly 45 % after three years, the most common reason was expulsion. Women without son reported significantly high rate of IUDs discontinuation due to expulsion and contraceptive failure than women who had a son. This as an indication that women without son had deliberately removed the IUD and reported this as an expulsion or contraceptive failure, in hopes of satisfying

their family wish for a son, while avoiding the criticism of deliberately exceeding the two-child limit. Assessments of medical technology usually consider only clinical and service aspects. A gender analysis of contraceptive effectiveness data that also take into account the social, cultural and political context, can offer insights into the complexities of women's reproductive lives and the contradictory demands on their fertility.

2.4.1 Reason for discontinuing of using DMPA

Across six countries and numerous studies, the three main reasons given for discontinuation are (1) desire for a child, (2) method failure, and (3) health concerns (including side effects); availability, access, and cost were rarely given as reasons for discontinuation (Ali & Cleland, 1995).

According to the surveys the reasons related to non-use of contraception are:

- Headache, weakness, nausea
- Weight loss
- Insufficient money for nutritious food
- Heavy bleeding
- Currently in poor health
- Affect breast feeding and dries breast milk
- Husband disapproval

Fear of side effects is one of the main causes of discontinuation of use of contraceptive. Contraceptive prevalence rate survey in Thailand, 1984. A multiple classification analysis showed that there were no significant differences in the levels of current use when travel time to an outlet was examined. This finding confirms that Thai-women found travel to be no substantial barrier to contraceptive use.

CHAPTER III

RESEARCH METHODOLOGY

3.1 Research design

In this study the research design is a cross-sectional study. This study design is to identify association between the discontinuation of DMPA use and individual attributes as well as attitude toward DMPA use.

3.2 Research population and sampling

This research focuses on only one kind of injectable contraceptive method, DMPA (Depot-medroxyprogesterone acetate). Also, know as Depo-Provera®, Depo, and Megestron®.

The study was a descriptive study focusing on the discontinuation of using DMPA injection in health centers in Di Linh district, Lam Dong province, Vietnam

Study population and sample size: The target populations are married women in reproductive age in Di Linh district, Lam Dong province. Particularly, the age of married women from 20-40 years old (contraindication for women exclude 20-40 years old), and received DMPA from health center.

Sample size is estimated as the formula following:

$$n = \frac{Z_{\alpha/2}^2 P(1-P)}{d^2} = 250$$

- n = estimated sample size

- z = the standard normal deviation with 95% confidence;

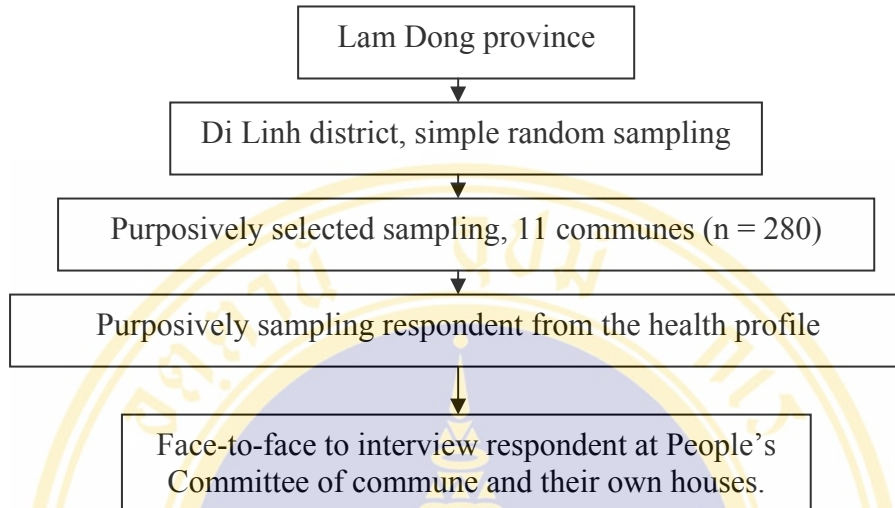
$\alpha = 0.05 \Rightarrow z = 1.96$ (at two tails). $1-\alpha$ is probability that this sample size will cover the true population. Usually for the level of coverage is set 95 %.

- p = proportion of discontinuation of using DMPA method among married women was found in year 2002 in Di Linh district (20 %), $p = 0.20$.
- d = degree of accuracy, set $d = 0.05$.

3.3 Sampling procedure

There were 18 communes in Di Linh district. The communes with distance of less than 20 kilometers from the district hospital were purposively selected as study sites. With these criteria, there were 11 communes in this study sampling. There are 280 discontinuers were interviewed, this sample size had more than 30 cases compared to the estimated sample size above. In the 11 communes of the study sampling, the number of respondent in each commune was all of respondents who discontinuation of DMPA uses in three years (2001 – 2003). Respondents were purposively chosen from the health profile regarding the use of DMPA in health center as well as from village health workers who take responsibility in supervising respondents.

Multistage sampling was used in this study:



3.4 Inclusion criteria:

Women were included in the study only if they met all of the following conditions:

- Healthy, informed female volunteers
- Age 20-40 years
- Had a health profile regarding the use of DMPA in health center
- Had at least one living child of her own
- Ability to complete a menstrual diary card
- Post-partum or post-abortion women who had only one menstrual circle since delivery or abortion

3.5 Exclusion criteria:

Women were excluded for any of the following reasons:

- Hypertension (BP greater than 140/90 mmHg in sitting position)
- Had diabetes or suspected
- Had history of thromboembolism
- Had cardiovascular diseases

- Alcoholism
- Heavy smoker
- Had jaundice in the past 12 months or during pregnancy
- Had abnormal discharge from nipples
- Papanicolaou smear grades 3, 4 or 5
- Had a suspected to have any kind of cancer

3.6 Research instrument

3.6.1 Questionnaire:

The instrument was used for data collection of this study was a structured questionnaire. The questionnaire was divided into six main parts as the followings:

1. Socio-economic and demographic characteristics
2. Knowledge on contraceptive practices
3. Attitudes towards DMPA methods
4. Health services about DMPA use
5. Experience of DMPA use, and
6. The main reason for discontinuation of DMPA use

3.6.1.1 Part 1 Socio-economic and demographic characteristics

Socio-demographic characteristics of the respondents include age, education, occupation, number of living children, sex of children desire, desire for additional children, husband's approval.

3.6.1.2 Part 2 Knowledge on contraceptive practices

Consist of questions about knowledge of contraceptive methods, knowledge of type, principle, indication, and the side effects of the methods.

To measure knowledge:

- Each correct answer was given a score of 1
- Each wrong answer (include false or not sure) is 0

There were 16 questions. Total score was 16. According to the mean and standard deviation of score, this study was classified into three groups as good knowledge (score more than “mean + SD”), fair knowledge (score equal “mean ± SD”), and poor knowledge (score less than “mean - SD”).

3.6.1.3 Part 3 Attitude towards DMPA injection

It was measured by Likert’s scale of five grades: strongly disagree, disagree, not sure, agree and strongly agree. To measure the attitude following criteria was used for scoring:

- Strongly agree (SA) = 5
- Agree (A) = 4
- Neutral (N) = 3
- Disagree (DA) = 2
- Strongly disagree (SD) = 1

There are 12 questions in measuring attitude. The positive range of score was 12-60, the answer strongly agree to the positive question give 5 score, if strongly disagree to the negative question give 5 score. The higher score are the more positive attitude. After computing statement score, attitude level was divided into two groups:

- Low score (negative attitude) = Less than “mean + SD” value
- High score (positive attitude) = Over or equal “mean + SD” value

3.6.1.4 Part 4. Health service of using DMPA

Availability and accessibility of DMPA included source of information, convenience of transportation to get DMPA contraception, quality of service, mode of travel, traveling distance, and communication.

3.6.1.5 Part 5: Experience of DMPA use

3.6.1.5.1 Side-effect: The effects of DMPA, not necessarily harmful, produced by diagnostic: change in menstrual bleeding, amenorrhea, may cause weight gain, headaches, sleeplessness, less sex driver.

3.6.1.5.2 Evaluation the effect of DMPA contraceptive method regarding sexual desire, sexual feeling, convenience and inconvenience of DMPA use.

3.6.1.6 Part 6: The main reasons for discontinuation of DMPA use:

These reasons were divided into three levels such as severe, tolerable and none or little.

3.6.2 Data collection:

The questionnaire was prepared in English and then translated into Vietnamese. The researcher contacted all related personnel in the place where the research was conducted.

Pretest the questionnaire in an actual field situation with 30 respondents to ensure that the expected reliability and validity of the study sample.

There were five interviewers to interview for data collection. The interviewers were medical doctors, nurses, and midwives who were experienced in health center in which two interviewers were K'Ho ethnic group because most respondents did not know to speak Vietnamese. All interviewers were trained and oriented to the objectives and technique of interviewing and meaning of questions, and they were supervised by researcher.

Data collection was done through face-to-face interviewed by interviewers. Researcher also checked the completed questionnaires and re-interviewed were undertaken where inconsistent or incomplete information was found.

3.7 Data processing and analysis

Supervisors check the completed questionnaires. The checked questionnaires were coded and enter the data into the computer for analysis.

SPSS program was used for data editing and processing. The first analyzed data of this study is descriptive and cross-tabulation. Frequency and percentage distribution are calculated for all variables. Describe the dependent variables by the independent variables, chi-square test was used to inferential the significant of study results, to evaluate association between independent and dependent variables according to the conceptual framework and objective of the study. Statistical tests were two-tailed and interpreted at the 5 % significant level.

CHAPTER IV

RESULTS

This chapter presents results of the study. The chapter consists of three sections. The first section includes frequency and percentage, describing the studied women in terms of their socio-demographic characteristics, level of knowledge in contraceptive method, level of attitude toward DMPA injection, source of information about DMPA, accessibility to health service, side effects and menstrual problems, and the main reason for discontinuation of DMPA use. The second section presents results of descriptive analysis. In inferential analysis, Pearson chi-square test was performed to find out the association among the variables concerned

4.1 Descriptive results:

4.1.1 General characteristics of the sample

This research was based on face to face interview in which 280 respondents were interviewed. All respondents were married women and discontinuers of DMPA use. In this study, the sample women were selected from 11 communes. During interviewing, the interviewers tried to contact all 280 discontinuers at health center and in respondents' houses.

General characteristics of the sample were shown in Table 2 to Table 11. The majority of the sample (70.4 percent) is in the age 30 to 40 years old: age group of 20-24 years (10 percent), age group of 25-29 years (19.6 percent), age group of 30-34 (26.1 percent), and age group of 35-40 (44.3 percent). The mean age is 32.66 years (see Table 2). In general, women in the sample had been married for about 12 years at the time of the study. About 13.6 percent of the women had been married for less than or equal 5 years, 33.9 percent of the women had been married for 6 - 10 years, and about 52.5 percent of married women who had been married more than 10 years (see Table 2).

Regarding education, most of respondents have no education (40.7 percent), 31.1 percent primary school, 22.5 percent secondary school, and there were only 5.7 percent of respondents had higher education (high school). It is noteworthy that there is no college or university regarding education level of respondents (see Table 2). For the occupation of these respondents, the largest group of respondents is in agricultural occupation (87.9 percent). The other occupational groups are housewife and small business (3.6 percent, and 4.6 percent, respectively) (See Table 3).

Table 2 Socio-demographic characteristics of the respondents

characteristics	Frequency	Percentage
Age		
20-24 years	28	10.0
25-29 years	55	19.6
30-34 years	73	26.1
35-40 years	124	44.3
Mean= 32.66 SD= 5.772	Min= 20	Max= 40
Duration of married		
≤ 5 yrs	38	13.6
6 – 10 yrs	95	33.9
> 10 yrs	147	52.5
Mean= 12.00 SD= 5.497	Min= 1	Max= 24
Education level		
No education	114	40.7
Primary school	87	31.1
Secondary school	63	22.5
High school	16	5.7

Table 3 Occupation, number of living children of the respondents

characteristics	Frequency	Percentage
Occupation level		
Officer	9	3.2
Worker	1	0.4
Farmer	246	87.9
Housewife	10	3.6
Businesswomen	13	4.6
Other	1	0.4
Number of living children		
No children	2	0.7
1 child	35	12.5
2 children	68	24.2
≥ 3 children	175	61.6
Mean= 3.18 Median = 3 Min= 0 Max= 8		
Number of living son		
No son	25	8.9
1 son	112	40.0
≥ 2 sons	143	51.1
Mean= 1.71 Median= 2 Min= 0 Max=5		
Number of living daughter		
No daughter	45	16.1
1 daughter	115	41.1
≥ 2 daughters	120	42.8
Mean= 1.46 Median= 1 Min= 0 Max= 5		

Table 4 Preference of sex's children, desire of additional children of the respondents

characteristics	Frequency	Percentage
Preference of sex's children		
Boy	13	4.6
Girl	24	8.6
Either boy or girl	243	86.8
	Min= 1	Max= 3
Desire of additional children (n= 66)		
≤ 2 children	35	53.0
≥ 3 children	31	47.0
Mean= 2.59	SD= 0.822	Min= 1
		Max= 4

The average number of living children is 3. Almost all respondents (85.8 percent) have 2 children and more, respondents having only 2 children are 24.2 percent, and less than or equal 1 children is 24.2 percent. The average number of living sons is 1.71. Women who have at least 1 living son are of larger number than those with no son (40.0 and 25.0 percent, respectively), women who have living son 2 and more are of the largest number (51.1 percent) in this study (see Table 3). Additional children of the sample were originated from 66 respondents who answered have not enough children. They would like to have another 2 children is 53 percent, and more than 3 children is 47 percent. It seems that almost respondents would like to have both son and daughter (86.8 percent), there were 8.6 percent of respondents preferred girl to boy (4.6 percent). (See Table 4)

In terms of duration of DMPA use, 280 respondents were discontinuers, the minimum of duration of DMPA use was one time of injection (3 months of DMPA use), and the maximum of duration of DMPA use was 13 times of injection (39 months of DMPA use). It was grouped into two groups as shown in Table 5. Respondents who had used for 1 to 2 times of injections were 36.7 percent as a “short term”; greater or equal 3 times of injections was 63.3 percent as a “long term”.

Table 5 Duration of DMPA use

Characteristic	Frequency	Percentage
Duration of use DMPA injection		
1-2 times injection “short term”	103	36.7
≥ 3 times injection “long term”	177	63.3
Mean=3.75 SD= 2.442	Min=1	Max= 13

Regarding to the main source of information about DMPA injection, there were 50 percent of respondents got the information from friends and 46.8 percent of respondents got the information from health workers, only 3.2 percent of respondents got the information from TV, radio, and others. More than a half of respondents (52.1 percent) lived within 3 to 5 km, 39.3 percent of respondents lived nearest to the health center (less than or equal 2 km), and 8.6 percent of respondents lived within 6 to 10 km. Almost more than a half of respondents go to health center by private vehicle (55 percent), 38.2 percent of respondent go to health center by walking, only 6.8 percent of respondents used public vehicle. There were 67.9 percent of respondents answered that transportation is convenient, 22.5 percent of respondents answered that average convenient, only 9.6 percent of respondents had inconvenient in transportation (see Table 6).

Table 6 Source of information and transportation

characteristics	Frequency	Percentage
Source of information about		
DMPA	140	50.0
Friend	131	46.8
Health worker	9	3.2
TV, Radio, others		
Distant from house to HC	110	39.3
≤ 2 km	119	52.1
3 - 5 km	24	8.6
6 – 10 km		
Mode of traveling	107	38.2
Walking	154	55.0
Private vehicle	19	6.8
Public vehicle		
Convenience to go for service	190	67.9
Convenient	63	22.5
Average	27	9.6
Not convenient		

4.1.2 Knowledge, attitude toward contraceptive methods and duration of DMPA use.

Knowledge and attitude were constructed as indicated in previous chapter (research methodology). The Table 7 showed the distribution of knowledge among respondents. Most of the respondents correctly identified the main factors related to contraceptive methods. There were 16 statements for the knowledge part: 3 negative statements and 13 positive statements. No respondent answered correctly all 16 statements. The highest number of correct answered is in positive statement with 92.5 percent, and the lowest number of correct answered is about 26.8 percent. Most of them successful answered. In negative statements, the highest number of correctly answered only 32.5 percent and the lowest was 3.2 percent. The mean score of

knowledge was 9.93 with standard deviation was 2.958. Good, fair, poor levels of knowledge were defined based on Mean \pm SD cutoff point. There were 23.6 percent, 61.1 percent, 15.4 percent of respondents had good knowledge (score $>$ mean+SD=12.88), fair knowledge (score = mean \pm SD=6.97–12.88), poor knowledge (score $<$ mean – SD=6.97), respectively. (Shown in Table 8)



Table 7 Correct answers on knowledge about contraceptive (* negative question)

Knowledge statement	Number of correct answer	Percentage
- IUD is a method use for pregnancy prevention in women only	(259)	92.5
- Family planning method helps women protect themselves from unwanted pregnancy	(256)	91.4
- Women must take oral pill every day in order to prevent pregnancy	(259)	92.5
- Injectable contraception (DMPA) can prevent pregnancy for three months	(254)	90.7
- Condom use can prevent not only pregnancy but also sexually transmitted diseases and HIV/AIDS	(253)	90.4
- Condom should be check for breakage before have sex intercourse	(242)	86.4
- Withdrawal has more chance to fail than other methods	(208)	74.3
- Spermicide is an contraception for women that used to prevent pregnancy after having sex intercourse	(208)	74.3
- After tubectomy, you will not be pregnant even you are having sex without protection	(195)	69.6
- Vasectomy, fully effective only after 20 ejaculations	(163)	58.2
- Before intercourse, insert diaphragm can prevent pregnancy	(135)	48.2
- Rhythm can prevent pregnancy for women who have regular menstruation cycle	(133)	47.5
- Using DMPA for along time will reducing fertility*	(91)	32.5
- Norplant should be removed 5 years after insertion	(75)	26.8
- Oral pill can cause dizziness and nausea*	(40)	14.3
- Menstrual problem is a side effect of injectable contraception*	(9)	3.2

Table 8 knowledge on contraceptive methods

characteristics	Frequency	Percentage
Knowledge of contraceptive use		
Good (score > 12.88)	66	23.6
Fair (score = 6.97-12.88)	171	61.1
Poor (score < 6.97)	43	15.4
Mean ± SD= 9.93 ± 2.958	Min= 1	Max= 15

Table 9 indicated the frequency and percentage distribution of attitudes among 280 respondents. The row percentage of each Likert's five-point scale was obtained. There were 3 negative and 9 positive statements. In this study, no respondent answered correctly all 12 statements. The highest number of correct answered was in positive statement with 56.8 percent, and the lowest number of correct answered is about 3.2 percent. In general, Most of them not successful answered. In negative statements, the highest number of correctly answered only 10.4 percent and the lowest was 2.9 percent. Further, one negative statement no respondents got the highest score; they were still undecided on their own evaluation in almost all of the attitude items, especially with the negative statements. As the attitude was constructed in chapter “research methodology”. The mean score of attitude was 42.5 with standard deviation was 4.156. In Table 10, attitude was divided into two groups. Positive attitude and negative attitude were defined based on Mean cutoff point. There were 57.5 percent of respondents had positive attitude (score>mean+SD=46.65), and 42.5 percent of respondents had negative attitude (score≤ mean+SD=46.65). (Shown in Table 10)

The average score of the attitudes towards DMPA contraception was 42.50 and ranged from 31 to 53. There were 57.5 of respondents with favorable attitude (score >46.65), in this study, with total score beyond 46. There were 42.5 percent of respondents had unfavorable attitude with final score less than 46 (shown in Table 10)

Table 9 Attitudes towards DMPA contraception (N = 280)

Attitude statement	SA	A	N	D	SD
	%	%	%	%	%
- Women should be stopped using DMPA because she has amenorrhea for a long time*		15	33.6	30.4	21
- DMPA injection may alter sexual desired	4.6	18.2	41.8	32.5	2.9
- DMPA injection improves family well-being	28.9	44.3	13.9	11.4	1.4
- DMPA injection may cause cancer*	10.4	53.2	15.4	19.3	1.8
- You must be checked up your health before having DMPA injection	40.4	40.7	10	8.6	0.4
- Women without children can use DMPA	8.6	35	23.9	28.6	3.9
- Women become more emotional after using DMPA	3.2	21.8	51.1	20.7	3.2
- Women who is breastfeeding, should not use DMPA*	2.9	36.1	41.4	18.6	1.1

Note: * negative question

Table 9 Attitudes towards DMPA contraception (Cont.)

Attitude statement	SA	A	N	D	SD
	%	%	%	%	%
- Young women, older women, and women without any children can use DMPA	4.3	46.1	18.2	26.8	4.6
- DMPA use saves the lives of children by helping women space births	51.8	41.1	3.9	3.2	
- DMPA injection do not prevent sexually transmitted diseases (STDs) including HIV/AIDS	56.8	30.7	4.3	5.7	2.5
- DMPA use should be the couple agreement	48.2	42.5	6.8	2.1	0.4

Note: * negative question

Table 10 Score of attitudes toward DMPA use

characteristics	Frequency	Percentage
Attitude toward DMPA use		
Positive attitude (high score > 46.65)	161	57.5
Negative attitude (low score ≤ 46.65)	119	42.5
Mean ± SD = 42.50 ± 4.156	Min= 31	Max= 53

4.1.3 Distribution of source of information regarding DMPA use

In this part, the data included the source of information, location for obtaining DMPA injection, and husband's agreeing to DMPA use. The source of information was divided into two groups such as friend group and health worker group (see Table 11)

Table 11 Source of information about DMPA use of respondents.

Characteristics	Frequency	Percentage
Source of information		
Friend/	140	50.0
Health worker/social worker	136	46.8
Newspaper, radio, TV	9	3.2
Obtain of DMPA injection		
Village health worker	2	0.7
Health center	278	99.3
Husband's approval		
Yes	248	85.6
No	32	14.4

For the source of information, most of respondents received the first source of information about DMPA contraception from their friends (50.0 percent), and 46.8 percent of respondents were provided by health workers and social workers, only 3.2 percent of respondents were provided by newspaper, radio, TV. Concerning the location where respondents obtained DMPA injection, almost all of respondents had to inject at health center (99.3 percent), only 0.7 percent of respondents had injection with village health workers. With respect husband's approval, most of respondents stated that they were approved by their husbands (85.6 percent); only 14.4 percent of respondents were not approved by their husbands (Table 11).

4.1.4 Side effects to the health condition of respondents.

Table 12 indicated the side effect of DMPA use in three levels. There are five symptoms of side effect were shown in the table and one symptom as other (specify), especially there were 12 missing cases here, it revealed that 12 respondents answered that their severe level of side effects because of gain weight (4.3 %). In severe level of side effect, although all of symptoms were shown: 1.8 percent of respondents had lost weight, 4.6 percent of respondent had headache, 7.1 percent of respondent had sleeplessness, and 2.5 percent of respondent had vaginal dryness.

Most of respondents (79.6 percent) had severe level of side effect with menstrual problem symptom. Further more, 0 percent had none or little of respondent had menstrual problem it means that all of 280 respondents had problem with menstrual problem.

Table 12 Side effect of DMPA use

Symptoms	Level of side effects					
	Severe		Tolerable		None	
	N	%	N	%	N	%
Gain weight	12	4.3	35	12.5	233	83.2
Lost weight	(5)	1.8	(60)	21.4	(215)	76.8
Headache	(13)	4.6	(156)	55.7	(111)	39.6
Sleeplessness	(20)	7.1	(89)	31.8	(171)	61.1
Vaginal dryness	(7)	2.5	(169)	60.4	(104)	37.1
Menstrual problem	(223)	79.6	(57)	20.4	(0)	0
Other	*	*	(2)	0.7	(266)	95.0

*Missing cases = the respondents did not answered what they are.

In tolerable level of side effect (Table 12), most of respondents had problem with vaginal dryness symptom (60.4 percent), after that headache, sleeplessness, lost weight, and menstrual problem with 55.7 percent, 31.8percent, 21.4percent, 18.9 percent, respectively. Although very few of respondents stated that they had problem with other symptoms, but they did not figure out what those symptoms are.

4.1.5 Menstrual problem to the health condition of the respondents

Table 12 figured out all of respondents had problem with menstruation. Table 13 shown all the symptoms of menstruation occurred during their DMPA use. In this study, the menstrual problems were arranged based on percentage of each symptom as follows: 1) Amenorrhea (65.4 percent), 2) Longer menstrual period (43.6 percent), 3) Prolong bleeding (39.6 percent), 4) Heavy bleeding (19.6 percent), 5) Shorter menstrual period (8.9 percent), 6) Light bleeding (7.5 percent), 7) Spotting (4.3 percent), 8) Menstrual pain(3.2 percent) (see table 13)

Table 13 The effect of DMPA injection on menstruation

Symptoms	Frequency	Percentage
Amenorrhea	183	65.4
Longer menstrual period	122	43.6
Prolonged bleeding	111	39.6
Heavy bleeding	55	19.6
Shorter menstrual period	25	8.9
Light bleeding	21	7.5
Spotting	12	4.3
Menstrual pain	9	3.2

4.1.6 Reason for discontinuation of DMPA use among respondents

Concerning the reasons for discontinuation of DMPA use, Table 14 indicated the range of the reason for discontinuing. According to the findings, menstrual problem was in the top of range with 82.5 percent of respondents revealed that. Meanwhile, only 0.7 percent of respondents indicated the severe level of reason for discontinuing DMPA use was long wait at the clinic. In addition, some respondents did not have any ideas related to lack of health staff, poor service, husband's approval as a reason for them to discontinue of using DMPA as well as Not available and gain weight they did not specify what the reasons are (Table 14).

In general, Table 15 shows the main reasons for discontinuation of the method. Among the women who discontinued, the main (important) reasons reported are menstrual problems (93.9 percent), side-effects (87.6 percent), dislike injection (55.7

percent), painful injection (41.1 percent), etc. The remaining reasons, most of which are service-related, such as: not enough staff in the health center, travel problem, desire for pregnancy, dissatisfied with service, long waiting time, injection schedule, appear to be less important reasons for the majority of discontinuers (proportions reporting range from 5.0 percent to 20.0 percent).

Table 14 Reason for discontinuation of DMPA use

Reasons	Severe		Tolerable		None	
	N	%	N	%	N	%
Menstrual problem	(231)	82.5	(32)	11.4	(17)	6.1
Dislike injection	(20)	7.1	(136)	48.6	(124)	44.3
Side effects	(14)	5.0	(208)	74.3	(58)	20.7
Desire for pregnancy	(14)	5.0	(16)	5.7	(250)	89.3
Injection schedule	(7)	2.5	(54)	19.3	(219)	78.2
Painful injection	(6)	2.1	(109)	38.9	(165)	58.9
Too far from home	(4)	1.4	(43)	15.4	(233)	83.2
Long wait at clinic	(2)	0.7	(22)	7.9	(256)	91.4
Lack of health staffs	*	*	(56)	20	(224)	80.0
Poor services	*	*	(35)	12.5	(245)	87.5
Husband's disagree	*	*	(31)	11.1	(249)	88.9

* Respondents did not have any ideas related to those reasons

Table 15 Total of severe + tolerable level of reason for discontinuation

Reasons	Frequency	Percentage
Menstrual problem	(263)	93.9
Side effects	(220)	87.6
Dislike injection	(156)	55.7
Painful injection	(115)	41.1
Injection schedule	(61)	21.8
Lack of health staffs	(56)	20.0
Too far from home	(47)	16.8
Poor services	(35)	12.5
Husband's disagreeing	(31)	11.1
Long wait at the clinic	(24)	8.6
Desire for pregnancy	(20)	7.1

4.2 The association between duration of DMPA use and related factors

In this part, the study of association between related-factors and duration of DMPA use was divided into four sub-parts. The data included the association between level of duration of DMPA use and 1) Socio-demographic characteristics, 2) Knowledge and attitude toward DMPA contraception, 3) Health services, 4) Experience of DMPA use, 5) the main reason for discontinuation of DMPA use. In this study, the Chi-square test was used to find out the association.

4.2.1 Relationship between socio-demographic characteristics and duration of DMPA use

Table 16 revealed the relationship between socio-demographic characteristics and duration of DMPA use of 280 respondents in Di Linh district, Lam Dong province, Vietnam. There was no significant association between age and duration of using DMPA with 0.690 of p value. However, the figure shown that among young age (20-29 years old) had likely high using short term of DMPA use compared to older age women (30-40 years old) (38.6 percent, 36.0 percent respectively). Meanwhile, the respondent who had older age also slightly use long term of DMPA (64.0 %) higher than that of women who had younger age (61.4 %). Overall, the women who had older age more likely to using long term higher than that of women who had younger age. On the other hand, women in young age usually use short term of duration of DMPA use higher than that of older women.

Similarly, There was no significant difference between duration of marriage and duration of DMPA use with p-value = 0.227. It can be read as that women who had duration of marriage less than five years had high using short term (47.4 percent) compared to 31.6 percent, 37.4 percent in each duration of marriage (6-10 years, greater than 10, respectively). Meanwhile, The likelihood of women who had duration of marriage from 6 to 10 years had high using long term (68.4 percent) compared to 62.6 percent, 52.6 percent in each duration of marriage (greater than 10 years, less than or equal five years, respectively).

Table 16 Association between socio-demographic characteristics and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Age in years			0.159	0.690
20-29	32(38.6)	17(60.7)	(1)	
30-40	71(36.0)	126(64.0)		
Duration of marriage (years)			2.963	0.227
1-5	18(47.4)	20(52.6)	(2)	
6-10	30(31.6)	65(68.4)		
10-24	55(37.4)	92(62.6)		

4.2.2 Relationship between number of living children and duration of DMPA use.

Table 17 presented the relationship between number of living children and duration of DMPA use. The respondents who had one child or less than, most of them (48.6 percent) had used short term, while most of respondents who had three or more than children had high using long term of DMPA use (68.0 percent). However, there was no significant association between number of living children and level of duration of DMPA use with p-value = 0.083.

Table 17 Association between number of living children, number of living son and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Number of living children			4.967 (2)	0.083
≤ 1 child	18(48.6)	19(51.4)		
2 children	29(42.6)	39(57.4)		
≥ 3 children	56(32.0)	119(68.0)		
Number of living son			10.586 (2)	0.005*
No son	8(32.0)	17(68.0)		
1 son	54(48.2)	58(51.8)		
≥ 2 children	41(28.7)	102(71.3)		

*significant level at p-value=0.05

4.2.3 Relationship between number of living son and duration of DMPA use

Table 17 indicated the relationship between number of living son and level of duration of DMPA use. That is, the respondents who had two son or more than had highest using long term level (71.3 %) compared to 51.8 percent, 68.0 percent of respondents who had one son or no son respectively. Overall, the respondents who had more than two living son will higher using long term, while the respondents who had no son they just used lower in both short term and long term of duration of DMPA use. There was a significant association between number of living son and duration of DMPA use with 0.005 of p-value.

4.2.4 Relationship between number of additional children, preference of child's sex and duration of DMPA use.

According to Table 18, there were 67.7 percent of respondents had three children up had used long term, 32.3 percent of them had used short term. Regarding

the group have less than or equal two children, most of them had used short term (54.3 percent), 45.7 percent of them had used long term. There was no significant association between number of additional children and duration of DMPA use with p-value = 0.072.

Table 18 Relationship between duration of DMPA use and number of additional children, preference of child's sex.

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Number of additional children			3.238 (1)	0.072
≤ 2 children	19(54.3)	16(45.7)		
≥ 3 children	10(32.3)	21(67.7)		
Preference of children's sex			3.067 (2)	0.216
Boy	7(53.8)	6(46.2)		
Girl	6(25.0)	18(75.0)		
Both	90(37.0)	153(63.0)		

There was no significant relationship between preference of child's sex and level of duration of DMPA use. Table 18 presented the relationship between preference of child's sex and duration of DMPA use. Regarding the preference of boy, the likelihood of respondents had high using short term (53.8 percent) compared to 25.0 % and 37.0 % of them who like girl baby and both respectively. With group that preference of girl, the likelihood of respondents had high using long term (75.0 percent) compared to 46.2 % and 63.0 % of them who like boy and both respectively. Regarding the preference of both boy and girl, the percentage of respondent had used long term and short term just in the medium level (63.0 percent, 37.0 percent respectively). There was no significant association between preference of child's sex and duration of DMPA use with p-value = 0.216.

4.2.5 Relationship between husband's approval and duration of DMPA use of discontinuation

Table 19 shown the results of the relationship between husband's approval and duration of DMPA use. The respondent who had husband's approval to using DMPA contraceptive method more likely had high using long term (64.9 percent) compared to 50.0 percent of respondent who had no husband's approval. There were 50 percent of respondents had high using short term of DMPA use without husband's approval. It was clear that without husband's approval the respondent just used for a short term and if husband's approval more likely to using for a long term. However, there was no significant relationship between husband's approval and duration of DMPA use with 0.100 of p value.

Table 19 Association between husband's approval and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Husband's approval			2.713	0.100
Yes	87(35.1)	161(64.9)	(1)	
No	16(50)	16(50.0)		

4.2.6 Relationship between knowledge on contraceptive practice and duration of DMPA use

The results from table 20 indicated the relationships between duration of DMPA use and two independent variables were significantly correlated using Pearson chi square test (p-value=0.001 for knowledge, p-value=0.010 for attitude).

Regarding knowledge on contraceptive practice of respondents, there were three groups: poor, fair and good knowledge on contraceptive practice. Good knowledge had score more than 12 (23.6 percent). Fair knowledge had score 6-12 (61.1 percent), and poor knowledge had less than 6 (15.4 percent) (see Table 8). With group poor knowledge, there were 79.1 percent of respondents using long term, 20.9

percent of them using short term. Likewise, in group fair knowledge, there were 45.0 percent, 55.0 percent of respondents using short term and long term respectively. With group had good knowledge, there were 25.8 percent, 74.2 percent of respondents had used short term and long term respectively. Overall, the respondent who had poor knowledge on contraceptive practice more likely to using long term of DMPA use higher than women who had fair and good knowledge.

Table 20 Association between knowledge, attitude toward DMPA use and duration of DMPA use.

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Level of attitude			6.571	0.010*
Positive attitude (>46)	49(30.4)	112(69.6)	(1)	
Negative attitude (\leq 46)	54(45.4)	65(54.6)		
Level of knowledge			13.098	0.001*
Poor (< 6)	9(20.9)	34(79.1)	(2)	
Fair (6-12)	77(45.0)	94(55.0)		
Good (>12)	17(25.8)	49(74.2)		

*Significant level at 0.05

With respect level of attitude toward DMPA use, there were two groups: positive attitude and negative attitude toward DMPA use. Positive attitude had score more than 46.65 (57.5 percent), negative attitude had score less than or equal 46.65 (42.5 percent) (see Table 4.7). Table 21 shown that there was significantly correlated between duration of DMPA use and attitude toward DMPA use with 0.010 of p value. It was very clear that respondents who have negative attitude, 45.4 percent had high using short term compared to 30.4 percent of those who had positive attitude. The respondent who had positive attitude had high using long term of DMPA use (69.6 percent) compared to 54.6 percent of respondents who had negative attitude.

4.2.8 Association between accessibility and duration of DMPA use

Table 27 in Appendix B indicates the relationships between duration of use and three independent variables: distance from home to health center, mode of traveling, and convenient transportation. There were no significant relationship between duration of DMPA use and three independent variables in accessibility.

Table 21 Association between effect of the time schedule for injecting on their work and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Effect of the time schedule on their work			13.395 (2)	0.001*
Major effect	14(58.3)	10(41.7)		
Minor effect	63(42.0)	87(58.0)		
No influence	26(24.5)	80(75.5)		

Regarding the effect of the time schedule on their work, there was a significant relationship between level of duration of DMPA use and effect of the time schedule on their work with p-value= 0.001. The respondent who had major effect of the time schedule for injecting on their work more likely to using short term of DMPA injection (58.3 percent) higher than the women who had “minor effect” or “no influence” (42.0 %, 24.5 % respectively) (Table 21). In terms of using long term, the respondents who had no influence of the time schedule for injecting on their work more likely to adopt long term (75.5 %) higher than women who had minor effect or major effect (58.0 %, 41.7 % respectively). Overall, it was very clear that respondent will continue to adopt long term of DMPA use if they have no influence of the time schedule for injecting on their work and vice versa.

Table 28 (see Tables in Appendix B) shows the association between communication and duration of DMPA use. Regarding this part, there were four

independent variables: explanation about advantages, disadvantages, time for next injection, and solve the problem of DMPA injection. There were no significant association between duration of DMPA use and four independent variables above.

4.2.9 Association between reason for choosing DMPA injection and duration of DMPA use

Table 22 presented the relationships between the reasons for choosing DMPA contraception and level of duration of DMPA use. Seven independent variables included in this part: not satisfied with other methods, doctor suggestion, convenience, fewer side effect, safe, effective, and ease to use. There were significant relationship between duration of use and three independent variables such as “not satisfied with other methods”, “safe” and “effectiveness” with 0.009, 0.010, and 0.009 respectively of p-value. However, there were no significant relationship between duration of DMPA use and four remained independent variables. In reason for choosing DMPA use, all of respondent who said “Yes” more likely to using short term of DMPA use higher than respondent who said “No”. Meanwhile, all of respondent who said “No” more likely to using long term of DMPA use higher than respondents who said “Yes”. It seems that they adopt DMPA use not because of those reasons but because of other reasons such as birth-spacing, do not want to have children any more, etc.

Table 22 Association between reason for choosing injection and duration of DMPA use

Reason	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Not satisfied with other method			6.822 (1)	0.009*
Yes	70(43.2)	92(56.8)		
No	33(28.0)	85(72.0)		
Doctor suggestion			1.224 (1)	0.269
Yes	87(38.3)	140(61.7)		
No	16(30.2)	37(69.8)		
Convenience			1.532 (1)	0.216
Yes	71(39.4)	109(60.6)		
No	32(32.0)	68(68.0)		
Fewer side effect			0.185 (1)	0.667
Yes	25(39.1)	39(60.9)		
No	78(36.1)	138(63.9)		
Safe			6.643 (1)	0.010*
Yes	63(44.1)	80(55.9)		
No	40(29.2)	97(70.8)		
Effectiveness			6.911 (1)	0.009*
Yes	61(44.5)	76(55.5)		
No	42(29.4)	101(70.6)		
Ease to use			1.283 (1)	0.257
Yes	67(39.4)	103(60.6)		
No	36(32.7)	74(67.3)		

*significant level at p value 0.05

4.2.10 Relationship between experience of DMPA use and duration of DMPA use

Table 23 indicates the relationships between duration of DMPA use and five independent variables (five symptoms of side effects of DMPA injection): lose weight, headache, sleeplessness, vaginal dryness, and menstrual problem. There were significant association between duration of DMPA use and two independent variables with p value = 0.008 (lose weight), 0.006 (headache). Regarding lose weight variable, there were 50.8 percent of respondents had severe and intolerable lost weight had used short term compared to 32.6 percent of respondents who none or little had lost weight. It was clear that the respondent just used short term of duration of DMPA if they had severe/intolerable with “lose weight” and if they had none or little of lost weight they had used long term higher than respondent who had severe/tolerable with lost weight. Similarly, It was clear that the respondent just used short term of duration of DMPA if they had severe/intolerable with five symptoms of side effect of DMPA contraceptive method and if they had none or little with five symptoms above they had used long term higher than respondent who had severe/intolerable with those symptoms. However, in menstrual problem variable, the respondent who had none or little with menstrual problem more likely to adopt DMPA use higher than respondent who had severe/intolerable with menstrual problem. Further more, women who had severe/intolerable with menstrual problem more likely to using long term (63.4 %) higher than that of women who had none or little with menstrual problem (50.0 %). However, there was no significant relationship between duration of DMPA use and menstrual problem, further more, in menstrual problem “none or little” sample was too small, therefore could not compare each other.

Table 23 Association between side effect of DMPA use and duration of DMPA use

symptom	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Lose weight			7.118	0.008*
Severe/intolerable	33(50.8)	32(49.2)	(1)	
None or little	70(32.6)	145(67.4)		
Headache			7.532	0.006*
Severe/intolerable	73(43.2)	96(56.8)	(1)	
None or little	30(27.0)	81(73.0)		
Sleeplessness			2.251	0.133
Severe/intolerable	46(42.2)	63(57.8)	(1)	
None or little	57(33.3)	114(66.7)		
Vaginal dryness			1.192	0.275
Severe/intolerable	69(39.2)	107(60.8)	(1)	
None or little	34(32.7)	70(67.3)		
Menstrual problem			0.305	0.581
Severe/intolerable	101(36.6)	175(63.4)	(1)	
None or little	2(50.0)	2(50.0)		

*Significant level at p value = 0.05

Table 24 presented the relationship between inconvenience of DMPA use and duration of DMPA use. According to the findings, there was a significant association between duration of DMPA use and “must have injection” independent variables with p-value = 0.005. The respondents who said “must have injection” was a “very important” factor more likely had high using short term (57.1 %) compared to 33.3 %, and 31.0 % of respondents who said “must have injection” was “moderately important” and “no influence” respectively. It also clear that the respondents who said “must have injection” was no influence more likely had high using long term (69.0 %) compared to 66.1 %, and 56.6 % of respondents who said “must have injection” was “moderate important” and “very important” respectively. There were no significant

relationship between duration of DMPA use and two independent variables: must go to hospital, and side effect. Regarding “must go to hospital” variable, It was clear that the respondents who said “must go to hospital” was a “moderate important” factor more likely had high using short term (42.9 %) compared to 34.4 %, and 32.6 % of respondents who said “must go to hospital” was “very important” or “no influence” respectively. It was also very clear that women who said “no influence” with “must go to hospital” more likely to adopt long term (57.1 percent) higher than women who said “very important” or “moderate important” with “must go to hospital” (65.6 %, 57.1 % respectively). Similarly, it was clear that respondents had high using long term (72.0 percent) because “side effect” was no influence on their DMPA use. Likewise, it was also very clear that respondents had high using short term (43.4 percent) because “side effect” was very important factor effect on their DMPA use compared to 33.9 %, 28.0 percent of respondents who said “side effect” was moderately important or no influence respectively.

Table 24 Association between inconvenience of DMPA use and duration of DMPA use (*Significant level at p value = 0.05)

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Must go to hospital			2.454	0.293
Very important	33(34.4)	63(65.6)	(2)	
Moderate important	42(42.9)	56(57.1)		
No influence	28(32.6)	58(67.4)		
Must have injection			10.715	0.005*
Very important	28(57.1)	21(42.9)	(2)	
Moderate important	49(33.3)	98(66.7)		
No influence	26(31.0)	58(69.0)		

Table 24 Association between inconvenience of DMPA use and duration of DMPA use (Cont.)

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Side effect			5.463	0.065
Very important	59(43.4)	77(56.6)	(2)	
Moderate important	21(33.9)	41(66.1)		
No influence	23(28.0)	59(72.0)		

A set of eight symptoms of menstrual problems cause by DMPA use are presented in Table 29 (see Tables in Appendix B). These include amenorrhea, longer menstrual period, shorter menstrual period, heavy bleeding, prolonged bleeding, light bleeding, spotting, and menstrual pain. The results suggest that this set of independent variables surrounding the menstrual problem have the effect on discontinuation of DMPA use. There were significant between duration of DMPA use and two sub-variables: longer menstrual period and prolonged bleeding with p-value = 0.001 (longer menstrual period), p-value = 0.000 (prolonged bleeding). The effect, however, varies with level of the problem; those who feel that they have menstrual problem such as “longer menstrual period”, “prolonged bleeding”, and “menstrual pain” are most likely to using short term of DMPA use. Women who feel that they have no problem are most likely to using long term of DMPA use. However, those who feel that they have menstrual problem such as “amenorrhea”, “shorter menstrual period”, “heavy bleeding”, “light bleeding”, and “spotting” are most likely to using short term of DMPA use. Women who feel that they have no problem are most likely to using long term of DMPA use.

When specific symptoms of the problem are considered, the result is in support of the general findings described above. Women who experienced “No” with longer menstrual period, prolonged bleeding, and menstrual pain are more likely to using long term of DMPA use when compared to those who experienced these

symptoms. On the other hand, those who experienced “Yes” with long menstrual period, prolonged bleeding, and menstrual pain tended to using short term of DMPA use.

Concerning the relationships between the feeling about sexual health and duration of DMPA use, Table 24 shown that a half of respondents had high using short term engaged decrease sexual desire compared to 35.0 percent, 30.0 percent of them with unchanged and decrease sexual desire respectively. In part of increase sexual desire, there was 70.0 percent of respondents had high using long term compared to 65.0 percent, and 50.0 percent of them had unchanged and decrease sexual desire respectively. Regarding the feeling on sexual intercourse, most respondent had used long term (66.7 percent) when they feel satisfying with sexual intercourse compared to 65.2 percent and 52.3 percent of respondent who had unchanged and less satisfying with sexual intercourse respectively. Women who feel less satisfying with sexual intercourse more likely to using short term higher than women who had satisfying and unchanged with sexual intercourse (33.3 %, and 34.8 % respectively). However, there was no significant relationship between duration of DMPA use and the feeling about sexual health with p-value=0.123 (effect on sexual desire), 0.261 (feeling on sexual intercourse).

Table 25 Association between menstrual problem and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Longer menstrual period			10.755 (1)	0.001*
Yes	58(47.5)	64(52.5)		
No	45(28.5)	113(71.5)		
Prolonged bleeding			12.884 (1)	0.000*
Yes	55(49.5)	56(50.5)		
No	48(28.4)	121(71.6)		

*significant level at p-value=0.05

4.2.11 Relationship between the main reason for discontinuation of DMPA use and duration of DMPA use.

There was no significant relationship between duration of DMPA use and the main reason for discontinuation of DMPA use as shown in Table 26 (see Appendix B). The respondent who had severe/ tolerable with the main reason for discontinuation of DMPA use such as menstrual problem, dislike injection, painful injection, lack of health staff, poor services, long wait at clinic, and husband disagree are more likely to using high short term of DMPA use.

CHAPTER V

DISCUSSION

5.1 Discussion

This study focuses on the determinants of the discontinuation of DMPA injection among married women in reproductive age in Di Linh district, Lam Dong province, Vietnam. The study included 280 discontinuers of DMPA use from eleven communes in Di Linh district. The result of analysis in the previous chapter indicate that socio-demographic characteristics, knowledge on contraception, attitude toward DMPA use, health services, and experience of DMPA use, the main reason for discontinuation play roles in duration of DMPA use. The research findings are discussed as follows.

5.1.1 Relationships between socio-demographic characteristics and duration of DMPA use.

From the finding of this study, there was 36.7 percent of respondent discontinued using DMPA injection after one to two times of injection, and 63.3 percent of respondent discontinued using DMPA injection after 3 or more times of injection. There were no significant association between duration of DMPA use and socio-demographic characteristics, except number of living son.

Although there is statistically no association, the likelihood of using short term DMPA will be higher for women who are young age, and the likelihood of using long term will be higher for women who are older age. The need of duration of DMPA use was considerably reduced with increasing age, therefore, the proportions using short term of DMPA use were likely to decline. However, the need using for long term of DMPA use was considerable increased with increasing age, therefore, the proportions using long term were likely to increase. Further, women in older age, they had enough living children and they did not want to have children any more. Therefore, they have

to continue using DMPA contraceptive method. Unfortunately, the statistical results have not proved any relationship between age and level of using DMPA injection.

Again there is no statistically association between duration of DMPA use and duration of marriage, married women who have shorter duration of marriage more likely had higher using short term of DMPA use than women who had 6-10 years of marriage, and married women who had more than 10 years of marriage. However, married women who had longer duration of marriage (more than 10 years) more likely had higher using long term of DMPA use. This finding indicated that women with longer duration of marriage are most likely to continue DMPA use than women who married for a short time. In fact, it was clear that those women who had longer duration of marriage they had already the number of children they desired, so they have to find out one contraceptive method that convenience for their health.

Regarding the relationship between the number of living son and duration of DMPA use, there was a significant relationship between two of variables with 0.005 of p-value. The results of the finding shown that respondents who had one son more likely had higher using short term of DMPA use than that of women who less than or greater than 1 son. The respondents who have two or more sons more likely had higher using long term than that of women who had smaller number of living son. This finding is positive relationship between duration of DMPA use and number of living son. In addition, Vietnam is a country that is suffering from centuries of feudal customs and traditional practices that effect family planning behavior. Although the government has adopted appropriate policies such as motivating the masses to practice family planning and decreeing equal status for women, these customs and practice could not be altered overnight. While behavior may be temporary changed, values, norms, and attitude remain. Thus many Vietnamese still hold on pronatalist ideas such as “the elephant has been born to the earth; the earth has to give grass to it”. Son preference persists, particularly in rural areas with deep-rooted belief such as “one son is worth 10 daughters”. Many women who have more than two daughters but no son still want to have a son thereby hampering the goal of population growth reduction. Son preferences appear to be weakening in Vietnam, it still affect

contraceptive use. Having is important for Vietnamese in order to maintain the family line and as a source of support for parents in old age, Simon N, family planning in Vietnam, 1995.

5.1.2 Relationships between knowledge, attitude toward DMPA injection and duration of DMPA use

The results from Table 20 indicated the relationships between duration of DMPA use and two independent variables were significantly correlated using Pearson chi square test.

Regarding knowledge on contraceptive of respondents, there was significant association between knowledge on contraceptive practice and level of duration of DMPA use with 0.001 of p-value. From the result of the findings, the likelihood of using long term of respondent might be higher for married women who had poor knowledge on contraceptive practice. The respondent who had fair knowledge are more likely to using short term higher than that of women who had good and poor knowledge on contraceptive method. Meanwhile, the respondent who had good knowledge just used in average level of DMPA use. Knowledge and attitude are related to the use of contraception. A woman must have at least some knowledge about certain contraceptive methods and the source where she can obtain service before she can acquire it for use. Without such knowledge, it is almost impossible for a person to use it. The knowledge of contraceptive methods, therefore, is an important factor that determines whether women will decide to using contraception. However, the findings from this study are inversely correlated between knowledge on contraceptive practice and duration of DMPA use. Success and failure in DMPA contraceptive methods is dependent on how much one knows about DMPA contraceptive methods. However, it cannot be assumed that awareness of DMPA contraceptive methods will necessarily guarantee that she will accept it use.

The research consequences concerned relationship between attitude toward DMPA use and duration of DMPA use. There was significant relationship between two of variables with 0.000 of p-value. According to the finding, married women who

have positive attitude had higher using long term than married women who have negative attitude of DMPA use. Meanwhile, married women who have negative attitude had higher using short term than married women who have positive attitude of DMPA use. With this finding, there is positive relationship between duration of DMPA use and attitude toward DMPA contraceptive method (Syed Intram Shabir, 2000). The family planning program in Vietnam was introduced along time ago and has received a strong political commitment from the government. The Information Education and Communication program (IEC) has played an important role in the successful implementation of the family planning program. Di Linh district, Lam Dong province is a mountain area, especially 18 communes of Di Linh district is in the rural area, more than 6 communes in the remote area are very far from district center, and almost respondents in this study are minority group (K'Ho minority group). Therefore, they difficulty received information on family planning program from all information sources, especially; they feel very difficult to communicate in Vietnamese. So there were differences in knowledge of family planning as well as attitude toward contraceptive use among discontinuers.

5.1.3 Relationships between experience of DMPA use and duration of DMPA use.

The experience of DMPA injection variable included side effect of DMPA injection, reason for choosing DMPA injection, and evaluation about inconvenience of DMPA use, the feeling on sexual intercourse, and the emotion on sexual desire. Concerning of experience of DMPA use, There were significant association between level of duration of DMPA use and three sub-variables, such as “not satisfied with other methods”, “safe”, and “effectiveness” (reason for choosing DMPA injection); “must have injection” (inconvenience of DMPA use); “lose weight”, and “headache” (side effect of DMPA use).

Regarding “reason for choosing DMPA use”, almost respondent are most likely to using higher short term when they said “Yes” with those reason, and they are most likely to using higher long term of DMPA use when they said “No” with those reason. This finding indicated that there is negative effect between duration of

use and reason for choosing DMPA use. It might be partly because they just wanted to try DMPA use, birth-spacing control partly because transportation is inconvenient, difficulties in reaching to health center, effect of the time schedule for injecting on their work, etc. Therefore, they just used for a short term of DMPA use, thereafter, they will move to other methods that the best suitable for their own choices. ". In general, one of the main reasons for not using DMPA contraceptive methods is not satisfied with other methods. If something happens to this contraception, women are likely to stop using or shift to other methods. One contraceptive method may be appropriate to some women but inappropriate for others, so women try to look for a suitable contraceptive method for their health.

With respect of inconvenience of DMPA use, there is positive relationship between inconvenience of DMPA use and duration of DMPA use. The result revealed that women who thought "must have injection" was a very important inconvenience more likely to using short term of DMPA use higher than women who thought "must have injection" just a minor important convenience or no influence. The finding also indicated that women without inconvenience of DMPA use most likely to continue using long term of DMPA use. This finding was reported most respondent who dislike injection, painful injection, must go to hospital, and must check their health before they get a contraceptive method.

Regarding symptoms of side effects of DMPA injection, the finding from this study are similar to previous research of injectable use that amenorrhea (65.4 percent) is a major reason for discontinuation in Thailand (Koetsawang, 1994). However, this finding contrast with other studies in Bangladesh (Riley, 1994), women perceived longer menstrual period, prolonged bleeding, heavy bleeding, light bleeding as an important determinants of discontinuation, while amenorrhea was virtually never consider with injectable use. Concerning symptom "lose weight" of side effect of DMPA use, there was an important determinant of duration of DMPA use. The likelihood of respondent who had severe/intolerable affected had higher using short term than respondent who had a little or none effected of lose weight during DMPA use. These findings are positive affected to duration of DMPA use. If they had

severe/intolerable side effect they will not continue to using DMPA, and if they did not have any side effect they will continue to using DMPA. On the other hand, those who experienced side effects had shorter use duration than those who did not experience side effects, Riley et al, 1994.

In general, menstrual disturbances were more often reported in continuation and discontinuation. But may be for discontinuation, good counseling may help them overcome these disturbances. The finding in this study, there is positive effect of menstrual disturbances to duration of DMPA use. The respondent who considered this kind of side-effects as "Yes" (longer menstrual period, prolonged bleeding, and menstrual pain) are more likely to using short term higher than those of the respondent who said "No", and the respondent who considered this kind of side-effects as "No" (longer menstrual period, prolonged bleeding, and menstrual pain) are more likely to using long term higher than those of the respondent who said "Yes". However, there is negative effect of menstrual disturbances to duration of DMPA use. The respondent who considered this kind of side-effects as "Yes" (amenorrhea, shorter menstrual period, heavy bleeding, light bleeding, and spotting) are more likely to using long term higher than those of the respondent who said "No", and the respondent who considered this kind of side-effects as "No" are more likely to using short term higher than those of the respondent who said "Yes". For instance, in amenorrhea problem, it might be amenorrhea did not make much matter to their health; therefore they plan to use long term of DMPA use. Similarly, the finding was shown for shorter menstrual period, light bleeding, and spotting. However, within heavy bleeding of menstrual disturbance, there is negative effect to duration of DMPA use. The respondent who had problem in heavy bleeding are more likely to using long term higher than that of women without heavy bleeding. In fact the sample size for this part was too small, therefore, it was not applicable when evaluation this finding. Further, it might be heavy bleeding happen after they use DMPA for along term of DMPA use. Overall, there was no significant association between heavy bleeding and duration of DMPA use. If there is good doctor counseling on DMPA use (including advantages, disadvantages, solve when have problems) women will be

ready to cope with potential problems and this may lead to greater levels of use of DMPA.

This study also examined the feeling of sexual satisfaction; it is not an important factor affecting discontinuation of DMPA injection. Previous research indicates that the injectable contraceptive does not have much effect on sexual feeling (the majority of respondents answered their sexual satisfaction was unchanged) but if there was dissatisfaction it was a significant factor contributing to a high risk of discontinuation. According to the finding from this study, this dissatisfaction may be caused by menstrual disturbances or other side-effects, for example, being tired or lacking sexual desire. Sometimes the effectiveness of DMPA contraception contribute to women having more sexual satisfaction as they are not afraid of unwanted pregnancy.

In addition, concerning the reasons for discontinuation of DMPA use, Table 15 indicated the range of the reason for discontinuing based on severe level of the reason. According to the findings, menstrual problem was in the top of range with 82.5 percent of respondents revealed that, dislike injection (7.1 %), side effects (5.0 %). Meanwhile, only 0.7 percent of respondents indicated the severe level of reason for discontinuing DMPA use was long wait at the clinic. Finally, the finding from the Table 28 revealed that there were no significant relationship between the main reason for discontinuation and duration of DMPA use. In general, Table 16 shows the main reasons for discontinuation of DMPA use. Among the women who discontinued, the main (important) reasons reported are menstrual problems (93.9 percent), side-effects (87.6 percent); dislike injection (55.7 percent), painful injection (41.1 percent). The remaining reasons, most of which are service-related, such as: not enough staff in the health center, travel problem, desire for pregnancy, dissatisfied with service, long waiting time, injection schedule, appear to be less important reasons for the majority of discontinuers (proportions reporting range from 5.0 percent to 20.0 percent). This finding is contrasted with the surveys the reasons related to non-use of contraceptive (Ali & Cleland, 1995). According to the surveys the reasons related to non-use of contraception are: 1) Headache, weakness, nausea. 2) Weight loses. 3) Insufficient

money for nutritious food. 4) Heavy bleeding. 5) Currently in poor health. 6) Affect breast feeding and dries breast milk. 7) Husband disapproval.



CHAPTER VI

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

The objectives of the study were to examine the determinants of the discontinuation of DMPA use among married women in reproductive age in Di Linh district, Lam Dong province, Vietnam.

As briefly discussed in the study, Analysis of determinants of discontinuation among 280 discontinuers in 11 communes in Di Linh district, Lam Dong province, Vietnam. The important determinants are a set of variables which have effect on health status mainly menstrual disturbances. The effect of socio-demographic variables is also important determinant of duration of DMPA use. This group of variable includes number of living son; Knowledge and attitude toward DMPA use are attributed important roles in duration of DMPA use; The impact of accessibility, especially in “the effect of time schedule for injecting on their work”; Reason for choosing the DMPA injection also play an important role in discontinuation such as “not satisfied with other methods, safe and effectiveness of DMPA use”. Side effect of DMPA use also had significant relationship with duration of DMPA use such as lose weight, and headache. The influencing of inconvenience of DMPA use, such as “must have injection”; the effect of menstrual problem: longer menstrual period, prolonged bleeding is also contributed to adopt duration of DMPA use. Other variables are a weaker determinant of discontinuation or no relationship between duration of DMPA use and those factors.

From the findings, this study explored several factors related to duration of DMPA use. It can be presented as the followings.

The respondents who had enough of living sons they tended to use for a long term of DMPA use because they do not want to have children any more.

Married women had poor knowledge on contraceptive method they wanted to use DMPA more for a long term. However, women with good knowledge on contraception they did not like to use long term of DMPA use.

Married women who have positive attitude toward DMPA use they used more for a long term of DMPA use.

The time schedule for injecting DMPA use had big problem on the work of married women. They just used short term of DMPA use because they could not manage on time for injecting with their work.

Almost respondents just wanted to use for a short term of DMPA use even though they thought that DMPA use was safe and effectiveness. Further, when they did not satisfied with other methods they also try to use for short term of DMPA use only.

Inconvenience of DMPA use attributed to adopt of DMPA use. The respondent did not want to use for a long term of DMPA use because they have to go to hospital and must have injection.

Side effect of DMPA use was important determinant of discontinuation of DMPA use. When the respondent had severe/tolerable with side effect, especially “weight loses” and “headache” they did not want to continue using for a long term of DMPA use. Further, they did not want to continue using DMPA when they had menstrual problem such as longer menstrual period and prolonged bleeding.

In summary, this study suggested that certain components from a set of beliefs about DMPA use of respondent in order to explore awareness among married women

in Di Linh district, Lam Dong province, and target in efforts to increase appropriate DMPA use.

6.2 Recommendations

According to research findings and author's understanding, recommendations are suggested under the two categories, one is implementation and policy planning, second part of recommendations related into future research.

6.2.1 Implementation and policy planning

DMPA use has many advantages: safe, effectiveness as significant relationship between those independent variables and duration of DMPA use. However, DMPA contraceptive method also has health side-effects, especially menstrual disturbances: longer menstrual period and prolonged bleeding; weight lose, headache. And the main reasons for discontinuation are health reasons: menstrual problem, side effect, dislike injection, painful injection, etc. To promote DMPA injectable use women need more detailed information from providers on side-effects and how to solve these effects. A provider should explain clearly on the advantages and disadvantages of DMPA use, as well as resolving the side-effects of DMPA injection.

The family planning program needs more IEC for women in reproductive age in order to ensure their knowledge and attitudes toward DMPA contraceptive methods as well as ensuring needed social support.

The likely reason is the time schedule for injecting DMPA. This was due to their long working hours without extra time to visit health center on time. Therefore, Service delivery schedules need to be more carefully integrated with schedules. To promote village health workers take care all of people who using DMPA injection in order help them when they problem with DMPA use and encourage them use DMPA contraception.

Reason for choosing DMPA injectable contraception plays an important role in discontinuation of DMPA injection. Women choose the DMPA injection because of not satisfied with other methods. So IEC on DMPA injection should subject to great stress not only the advantages but also the disadvantage and quality of service of DMPA contraception.

Inconvenience of DMPA uses also effect on discontinuation of DMPA use. Especially “must have injection” is an important determinant. Further, in the main reason for discontinuation also indicated that “dislike injection” is strong relationship with discontinuation of DMPA use. Therefore, if possible, program for appropriate technology in health should support the application of contraceptive patch in order to improve the use of DMPA contraception or diversify contraceptive methods with high quality, efficiency, safety, and convenience.

In recent years, HIV/AIDS awareness has been more widespread among a large number of people. Many people are more sensitive to any activities which can potentially lead to infection such as use of needles. DMPA Injectable contraception involves use of needles. Acceptors in this method can be more confident when health center can provide single-use injection device. In some resource-poor settings or where contraceptive supplies are limited, needle reuse – which can put clients at risk for blood-borne infectious such as HIV – sometimes occurs. This safe practice could indirectly help increase acceptability of DMPA use.

Although service delivery, psychological factors and several social factors are important determinants of discontinuation, it is quite obvious that high levels of discontinuation of DMPA use will not occur until there are substantial decreases in level of side-effects, especially those related to menstruation. Therefore, improvements in service delivery, IEC and counseling must occur simultaneously with improvement in the method itself.

Finally, special for family planning services, IEC and counseling in order to disseminate family planning program of the country. It is important to promptly

supply users with enough birth-control devices and gradually diversify contraceptive methods with high quality, efficiency, safety, and convenience. In particular, attention should be paid to increasing the rate of men who accept and apply contraceptive methods. It is necessary to consolidate and expand family planning support services by means of the state-operated public health care system. At the same time, efforts are needed to promote the role of the community in making family planning services available to each family and each user. It is necessary to guarantee widespread sales of birth-control devices. Incentive measures must be taken to encourage organizations, collectives, and private parties to provide family planning services under state management by the Ministry of Public Health.

It is necessary to strengthen population and family planning committees from the central down to grassroots levels. A widespread population and family planning network must be set up at each hamlet, each village to ensure that population and family planning information and services are readily available to community. Family planning information, education, and propaganda. It is necessary to consolidate population and family planning information, widespread disseminate population and family planning policies and measures, and organize appropriate and diversified educational activities to appeal to the whole society and reach out to all localities and recipients.

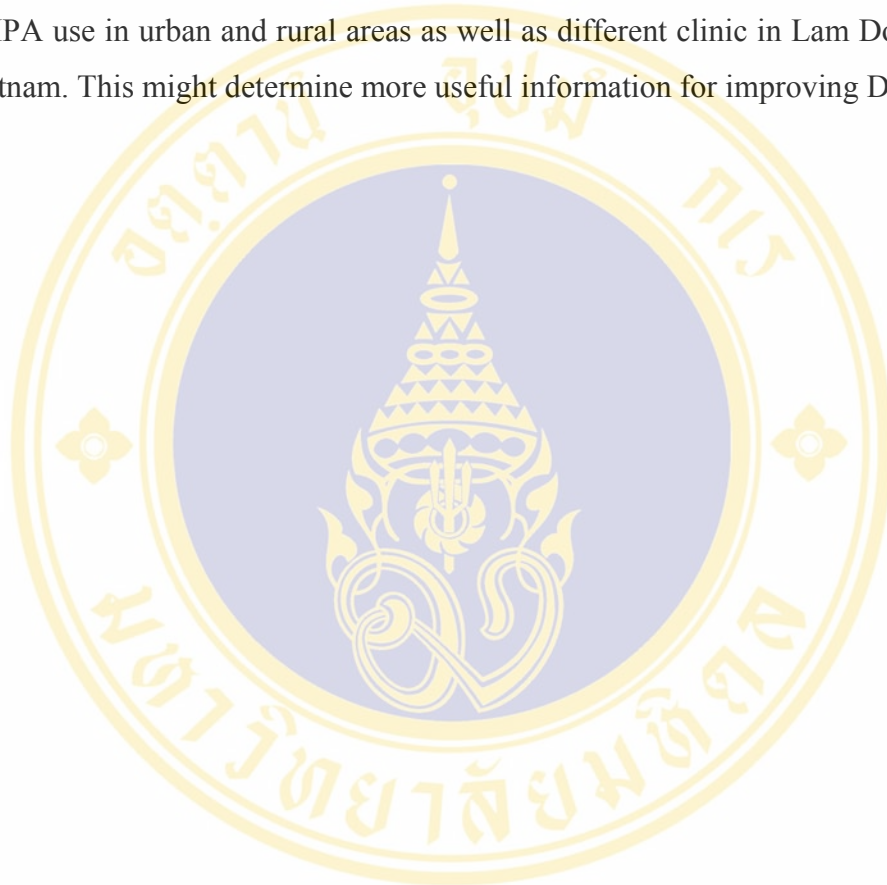
6.2.2 Future research

Future researchers in this field should be encouraged to conduct more qualitative research and clinical practice research of using DMPA injection.

1/ the result of this quantitative research discovered a limited information regarding discontinuation of respondent because it only used structured close-ended questionnaires as a major research instrument. Therefore, it would be necessary to use qualitative research to explore knowledge, attitude toward DMPA injectable contraceptive method as well as social factors that related to contraception especially in DMPA use. This would allow for an in-depth interview which would more

accurately determine validity and precise information concerning discontinuation of DMPA use.

2/ this study were conducted in rural areas in Di Linh district, Lam Dong province, Vietnam. Thus, the future researchers would need to compare discontinuation of DMPA use in urban and rural areas as well as different clinic in Lam Dong province, Vietnam. This might determine more useful information for improving DMPA use.



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APPENDIX

QUESTIONNAIRES

DETERMINANTS OF DISCONTINUATION OF DMPA USE IN REPRODUCTIVE AGE WOMEN IN DI LINH DISTRICT, LAM DONG PROVINCE, VIETNAM

Identification

Commune:.....

Respondent number:.....

- Name of respondent:.....
- Type of injection:.....
- Date of first injection:..... Duration of use..... months
- Date of last injection:..... Number of injection..... times
- Date of interview:..... Duration of interview.....

PART I: SOCIO-ECONOMIC DEMOGRAPHIC CHARACTERISTICS

1. How old were you on your last birthday? [.....yrs]

2. How long have you been married? [.....yrs]

3. What was the last level of schooling you completed?

- | | |
|-------------------------|--------------------|
| 1. No education [] | 4. High school [] |
| 2. Primary school [] | 5. Tertiary [] |
| 3. Secondary school [] | 6. Others |

4. What is your occupation?

- | | |
|----------------|------------------|
| 1. Officer [] | 4. Housewife [] |
| 2. Worker [] | 5. Business [] |

3. Farmer []

6. Others (specify).....

5. How many living children (son and daughter) do you have?

1. Number of sons []

2. Number of daughters []

6. Do you think that the number of your children at present is enough?

1. enough []

2. Not enough []

3. Not sure []

7. If not enough or not sure, how many children do you wish to have?

1. Sons: []

2. Daughters: []

8. In general, regardless of your present children, what is your preference on sex of children?

1. Boy []

2. Girl []

3. Both boy and girl []

9. Do you think that your husband is approval with you for using DMPA injection to prevent pregnancy?

1. Yes []

2. No []

3. Do not know []

PART II: KNOWLEDGE OF CONTRACEPTIVE PRACTICE

For the following statements please specify “ χ ” whether you think it is true or false statements, if you are not sure or do not know please answer column “don’t know”

No	Knowledge statement	True	False	Don't know
10	Family planning method helps women protect themselves from unwanted pregnancy			
11	IUD is a method use for pregnancy prevention in women only			
12	After tubectomy, you will not be pregnant even you are having sex without protection			
13	Withdrawal has more chance to fail than other methods			
14	Using DMPA for along time will reducing fertility			
15	Injectable contraception (DMPA) can prevent pregnancy for three months			
16	Oral pill can cause dizziness and nausea			
17	Women must take oral pill every day in order to prevent pregnancy			
18	Menstrual problem is a side effect of injectable contraception			
29	Condom use can prevent not only pregnancy but also sexually transmitted diseases and HIV/AIDS			
20	Condom should be check for breakage before have sex intercourse			

No	Knowledge statement	True	False	Don't know
21	Spermicide is an contraception for women that used to prevent pregnancy after having sex intercourse			
22	Norplant should be removed 5 years after insertion			
23	Vasectomy, fully effective only after 20 ejaculations			
24	Before intercourse, insert diaphragm can prevent pregnancy			
25	Rhythm can prevent pregnancy for women who have regular menstruation cycle			

PART III: ATTITUDE TOWARD DMPA USE

SA = Strongly agree

A = Agree

N = Neutral

D = Disagree

SD = strongly disagree

For each item, mark an “ χ ” on the line that best represents your opinion

No	Attitude statement	SA	A	N	D	SD
26	Young women, older women, and women without any children can use DMPA					
27	DMPA use saves the lives of children by helping women space births					
28	DMPA injection do not prevent sexually transmitted diseases (STDs) including HIV/AIDS					
29	DMPA use should be the couple agreement					
30	Women should be stopped using DMPA because she has amenorrhea for a long time					
31	DMPA injection may alter sexual desired					
32	DMPA injection improves family well-being					
33	DMPA injection may cause cancer					
34	You must be checked up your health before having DMPA injection					
35	Women without children can use DMPA					
36	Women become more emotional after using DMPA					
37	Women who is breastfeeding, should not use DMPA					

PART IV: HEALTH SERVICE OF USING DMPA CONTRACEPTION

Accessibility and availability of DMPA use

38. Which is the first source that you get DMPA information?

- | | | | |
|----------------------|-----|-------------------|-----|
| 1. Husband | [] | 5. T.V | [] |
| 2. Neighbor, friends | [] | 6. Health workers | [] |
| 3. Newspapers | [] | 7. Social workers | [] |
| 4. Radio | [] | 8. Drug seller | [] |

39. Where did you obtain DMPA injection?

- | | | | |
|--------------------------|-----|-------------------------|-----|
| 1. Hospital | [] | 5. Private clinic | [] |
| 2. Village health worker | [] | 6. Health center | [] |
| 3. Community PHC center | [] | 7. Do not know | [] |
| 4. Drugstore | [] | 8. Other (specify)..... | |

40. How far is that place from your house to the health center?

- | | | | |
|--------------|-----|------------|-----|
| 1. ≤ 2 km | [] | 4. > 10 km | [] |
| 2. 3 – 5 km | [] | 5. Others | [] |
| 3. 6 – 10 km | [] | | |

41. How did you go to the service center?

- | | | | |
|--------------------|-----|-------------------|-----|
| 1. Walking | [] | 3. Public vehicle | [] |
| 2. Private vehicle | [] | 4. Others | [] |

42. How convenient is transportation from your house to the health center?

- | | | | | | |
|---------------|-----|------------|-----|-----------------|-----|
| 1. Convenient | [] | 2. Average | [] | 3. Inconvenient | [] |
|---------------|-----|------------|-----|-----------------|-----|

Communication

43. Did any health personnel convince you or your partner to use DMPA injection?

1. Yes [] 2. No []

44. What is the effect of the time for injecting DMPA on your work?

1. Major effect [] 2. Minor effect [] 3. No effect []

45. Have the doctors and midwives provided you with good service?

1. Yes [] 2. No [] 3. Do not know []

(If yes, go to Q.46)

46. Did they check your health clearly, before you use DMPA injection?

1. Yes [] 2. No [] 3. Do not know []

47. Were they clear in explaining to you the advantages of DMPA injection?

1. Clear [] 2. Unclear [] 3. Did not explain []

48. Were they clear in explaining to you the disadvantages of DMPA injection?

1. Clear [] 2. Unclear [] 3. Did not explain []

49. Were they clear in explaining to you when you had to return for the next injection?

1. Clear []

2. Unclear []

3. Did not explain []

50. Were they clear to explain what to do if you had a problem with DMPA injection?

1. Clear []

2. Unclear []

3. Did not explain []



PART V: EXPERIENCE OF DMPA USE

Reasons for choosing DMPA use, inconvenience of DMPA use

51. Did the following have an effect on your choice of DMPA injection?

Indicators	Effect on the choice of DMPA injection	
	Yes	No
Not satisfied with other methods		
Doctor's suggestion		
Convenience		
Fewer side-effects		
Safe		
Effective		
Ease to use		

52. Evaluate the level of inconvenience for DMPA injection use the following items, using the following scale:

Items	Level of inconvenience for DMPA injection		
	Very important	Moderately important	No influence
Must go to hospital			
Must have injection			
Side-effects			

Side effects of DMPA use

53. Using the scale of severe, tolerable, little or none effect, evaluate the side effect of DMPA injection according to the following symptoms:

Symptom	Level of effect on health		
	Severe	Tolerable	Little or none
a. Lost weight			
b. Headache			
c. Sleeplessness			
d. Vaginal dryness			
e. Menstrual problems			
f. Others (specify)			

If answer “Little or none” for (e) go to Q.55

54. Does DMPA injection has an effect on the following aspects of your menstruation?

Symptom	Effect of your menstruation	
	Yes	No
a. Amenorrhea		
b. Longer menstrual period		
c. Shorter menstrual period		
d. Prolonged bleeding		
e. heavy bleeding		
f. light bleeding		
g. Spotting		
h. menstrual pain		

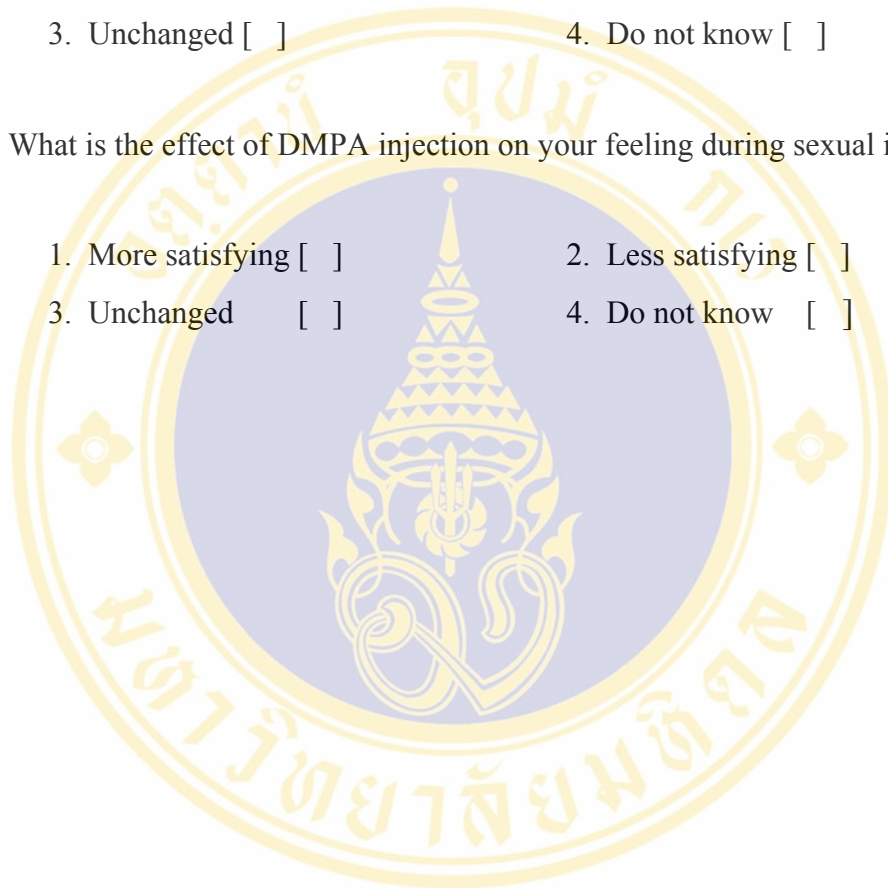
Sexual desire and sexual feeling of DMPA use

55. What is the effect of DMPA injection on your sexual desire?

- | | |
|------------------|--------------------|
| 1. Increase [] | 2. Decrease [] |
| 3. Unchanged [] | 4. Do not know [] |

56. What is the effect of DMPA injection on your feeling during sexual intercourse?

- | | |
|------------------------|------------------------|
| 1. More satisfying [] | 2. Less satisfying [] |
| 3. Unchanged [] | 4. Do not know [] |



PART VI: THE MAIN REASON FOR DISCONTINUATION OF DMPA USE

57. Did the following reasons have a severe, moderate, or little effect on your decision to stop use of DMPA injection?

Reasons	Level of discontinuation of DMPA use		
	Severe	Moderate	Little or none
Desire for pregnancy			
Side-effects			
Menstrual problems			
Dislike injection			
Painful injection			
Lack of health center staff when visited			
Poor services			
Long wait at the clinic			
Husband disagrees			
Unable to remember injection schedule			
Too far from home to the health center			
Others (specify)			

Thank you very much for your kindly cooperation

Name of interviewer:.....

Signature:.....

APPENDIX B

Table 26 Association between the feelings about sexual health and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Effect on sexual desire			4.196 (2)	0.123
Increase	9(30.0)	21(70.0)		
Decrease	22(50.0)	22(50.0)		
Unchanged	72(35.0)	134(65.0)		
Feeling on sexuality			2.690 (2)	0.261
More satisfying	1(33.3)	2(66.7)		
Less satisfying	21(47.7)	23(52.3)		
Unchanged	81(34.8)	152(65.2)		

Table 27 Association between the main reason for discontinuation of DMPA use and duration of DMPA use

Reasons	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Desire for pregnancy			0.172 (1)	0.678
Severe/tolerable	10(33.3)	20(66.7)		
None or little	93(37.2)	157(62.8)		
Side effect			0.259 (1)	0.611
Severe/tolerable	80(36.0)	142(64.0)		
None or little	23(39.7)	35(60.3)		
Menstrual problem			0.423 (1)	0.515
Severe/tolerable	98(37.3)	165(62.7)		
None or little	5(29.4)	12(70.6)		

Table 27 Association between the main reason for discontinuation of DMPA use and duration of DMPA use (Cont.)

Reasons	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Dislike injection			0.023	0.878
Severe/intolerable	58(37.2)	98(62.8)	(1)	
None or little	45(36.3)	79(63.7)		
Painful injection			2.059	0.151
Severe/intolerable	48(41.7)	67(58.3)	(1)	
None or little	55(33.3)	110(66.7)		
Lack of health staff			0.188	0.664
Severe/intolerable	22(39.3)	34(60.7)	(1)	
None or little	81(36.2)	143(63.8)		
Poor services			0.634	0.426
Severe/intolerable	15(42.9)	20(57.1)	(1)	
None or little	88(35.9)	157(64.1)		
Long wait at clinic			1.971	0.160
Severe/intolerable	12(50.0)	12(50.0)	(1)	
None or little	91(35.5)	165(64.5)		
Husband disagree			1.052	0.305
Severe/intolerable	14(45.2)	17(54.8)	(1)	
None or little	89(35.7)	160(64.3)		
Unable to remember injection schedule			2.667	0.102
Severe/intolerable	17(27.9)	44(72.1)	(1)	
None or little	86(39.3)	133(60.7)		
Too far from home to the health center			0.009	0.924
Severe/intolerable	17(36.2)	30(63.8)	(1)	
None or little	86(36.9)	147(63.1)		

Table 28 Association between accessibility and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Distance from home to health center			0.183 (2)	0.912
≤ 2 km (short)	42(38.2)	68(61.8)		
3 - 5 km (Average)	52(35.6)	94(64.4)		
6 – 10 km(long)	9(37.5)	15(62.5)		
Mode of traveling			0.904 (2)	0.636
Walking	43(40.2)	64(59.8)		
Private vehicle	53(34.4)	101(65.6)		
Public vehicle	7(36.8)	12(63.2)		
Convenience of transportation			3.346 (1)	0.067
Convenient	63(33.2)	127(66.8)		
Inconvenient	40(44.4)	50(55.6)		

Table 29 Association between communication and duration of DMPA use

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Explanation about advantage			0.127 (1)	0.721
Clear	82(36.3)	144(63.7)		
Unclear	21(38.9)	33(61.1)		
Explanation of next injection			0.924 (1)	0.336
Clear	92(35.9)	164(64.1)		
Unclear	11(45.8)	13(54.2)		
Explanation of solving the problems			0.671 (1)	0.413
Clear	98(37.4)	164(62.6)		
Unclear	5(27.8)	13(72.2)		
Explanation about disadvantage			1.115 (1)	0.291
Clear	58(34.3)	111(65.7)		
Unclear	45(40.5)	66(59.5)		

Table 29 Association between menstrual problem and duration of DMPA use (Cont.)

Characteristics	Duration of DMPA use		χ^2 (df)	P value
	Short term N= 103(%)	Long term N= 177(%)		
Amenorrhea			0.364	0.546
Yes	65(35.5)	118(64.5)	(1)	
No	38(39.2)	59(60.8)		
Longer menstrual period			10.755	0.001*
Yes	58(47.5)	64(52.5)	(1)	
No	45(28.5)	113(71.5)		
Shorter menstrual period			0.270	0.603
Yes	8(32.0)	17(68.0)	(1)	
No	95(37.3)	160(62.7)		
Prolonged bleeding			12.884	0.000*
Yes	55(49.5)	56(50.5)	(1)	
No	48(28.4)	121(71.6)		
Heavy bleeding			0.485	0.486
Yes	18(32.7)	37(67.3)	(1)	
No	85(37.8)	140(62.2)		
Light bleeding			0.116	0.733
Yes	7(33.3)	14(66.7)	(1)	
No	96(37.1)	163(62.9)		
Spotting			0.064	0.800
Yes	4(33.3)	8(66.7)	(1)	
No	99(36.9)	169(63.1)		
Menstrual pain			0.235	0.628
Yes	4(44.4)	5(55.6)	(1)	
No	99(36.5)	172(63.5)		

*significant level at p-value=0.05

BIOGRAPHY

NAME	Mul Loi
DATE OF BIRTH	February 19, 1963
PLACE OF BIRTH	Gung Re commune, Di Linh district, Lam Dong province, Vietnam
INSTITUTION ATTENDED	Master of Primary Health Care Management, 2003-2004 ASEAN Institute for Health Development, Mahidol University, Thailand. Health Social Science International Program 2002-2003, Mahidol University, Thailand. Medical Doctor, in obstetrics, Tay Nguyen Medical University, Dak Lak, Vietnam, 1983-1989
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