TEMPORARY MIGRATION EXPERIENCE AND CONTRACEPTION USE AMONG WOMEN WITH A HIGH PROPENSITY TO MIGRATE: A CASE STUDY OF KANCHANABURI DEMOGRAPHIC SURVEILLANCE SYSTEM (KDSS), THAILAND

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ABSTRACT:

Using data from the 2004 Kanchanaburi Demographic Surveillance and system (KDSS), conducted by the Institute for Population and Social Research (IPSR), Mahidol University, this study investigated the relationship between temporary migration experience and contraception use among women with a high propensity to migrate in reproductive age.

The findings of the study indicate that women who had moved in the year prior to the survey were less likely to use contraception compared to those women who had never moved. In addition, Thai women, working women, healthy women, and women aged 30-34 are more likely to use contraception than their counterparts. As the number of children increased, the rate of contraception use also increased. There was no significant association between strata, education, and household assets and contraception use.

The findings suggest a need to provide more sensitive and inclusive health care services including family planning programs to take into account women away from their usual residence.

KEY WORDS: TEMPORARY MIGRATION/CONTRACEPTIVE USE/MARRIED WOMEN/REPRODUCTIVE AGE (20-34)

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AIDS	Acquired Immune Deficiency Syndrome
DHS	Demographic Health Survey
HIV	Human Immune Deficiency Virus
IUD	Intra Uterine Device
IPSR	Institute for Population and Social Research
KDSS	Kachanaburi Demographic Surveillance System
NFPP	National Family Planning Program
NGO	Non-Government Organization
STI	Sexual Transmitted Infection
TFR	Total Fertility Rate
US	United States
WHO	World Health Organization

CHAPTER I
INTRODUCTION

1.1 Background

Thailand has experienced a relatively rapid decline in fertility within past few decades. The most current (in 2010) total fertility rate is 1.5, a decline from 6.4 during the first half of 1960s, 3.6 during the first half of 1980, and 1.6 in 2006 (IPSR, 2010). The decline is contributed by Thailand's highly successful government-sponsored family planning program which has resulted in a dramatic decline in population growth. The contraception prevalence rate is 74% in 2010 (IPSR, 2010). Thailand started National Family Planning Program (NFPP) in 1970, when TFR was 6.3 and reduced to 1.7 in 2003 (WHO, 2003). The Thai government has established first policy for family planning in 1970, and has been working until now to promote family planning to reduce all complications related to pregnancy, STIs, unsafe abortion and to improve the quality of life. NFPP in Thailand provides different methods of contraception including male and female sterilization, Norplant, injection, IUD, pills, and condoms (WHO, 2010).

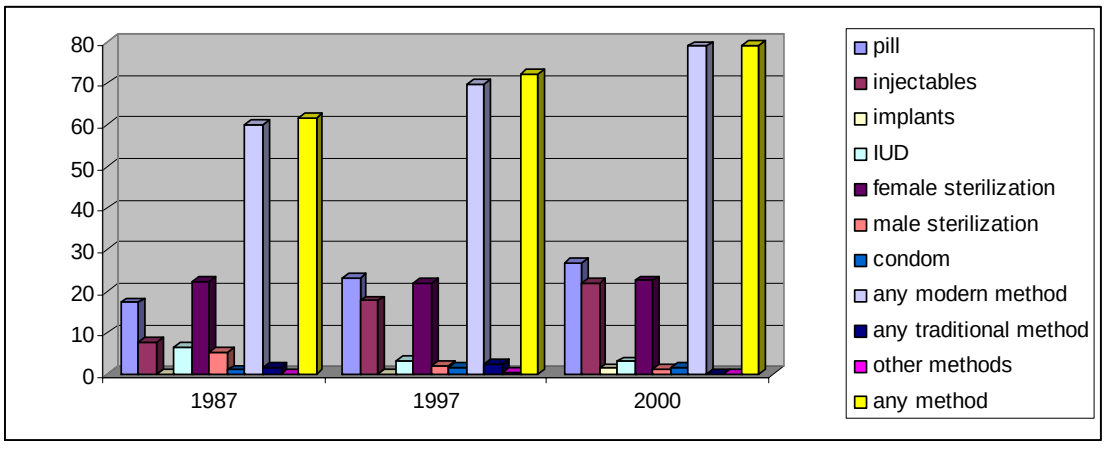

Figure 1.1 Trend in contraceptive method use in Thailand

Source: Thailand DHS, 1987: 1997: Thailand Reproductive Health Profile, 2003

Some background information of Thai population is worth noting here. The population of Thailand is about 63,776,000, from whom 17,809,000 or 28% are women in reproductive age. More than one third of the Thai population (36.2%) is living in urban areas (IPSR, 2010). In general, Thais are relatively homogeneous. More than 85% speak Thai language and follow the same culture. The population includes the central Thai including Bangkok's population (33.7%), Northeastern Thai or Lao (34.2%), northern Thai (18.8%), and southern Thai (13.3%) (US, 2010). In terms of religion, the majority of Thai population is affiliated with Buddhism, while the largest minority group adheres to Islam. For Muslims, different reports mention different number of Muslims in Thailand. According to the National Statistic Office the proportion of Muslims in Thailand is 5.8% which equals 4 million from the whole Thailand's population. However, some Muslims scholars claim that there are about 6 million of Muslims living in Thailand (Jampaklay, 2010).

Since the past four decades Thailand has experienced rapid socio-economical developments, which cluster around certain areas. This causes economical and social differences among Thai population living in different geographical areas. In some areas people can not find job, so they seek job in other areas (Kangsasitiam, 2004). Thailand has experienced both kinds of migration including internal and international migration. As moving within country is relatively convenient in the Thai context, internal migration is a common phenomenon in Thai society. According to one of pioneer work on migration, three kinds of internal movement characterized Thai society, single-move, seasonal move, and repeat move. While the first can be treated as long-term migration, the latter two are temporary. All forms of migration are characterized by different geographical flows and different selectivity patterns. Individuals who are young adult and highly educated female usually select the long-term migration which occurs between urban and urban areas or between rural and urban areas. Temporary migration mainly involves movement back and forth between urban and rural places and is most likely to be engaged in by those with a medium level of education (Guest et al., 1994). Although rural to rural migration is still common in most Asian countries, in Thailand the share of this form of migration is decreasing, while the share of the rural to urban migration has been increasing (Pejaranonda et al., 1995, cited in Guest,

2003). In the Thai context, temporary moves, which include both seasonal movement and other form of short-term movement, have been estimated for one-third of all migration with durations of one month or more (Chamratrithirong et al., 1995).

Although family planning in Thailand is relatively successful and reached out the majority of women in reproductive age, constraints in access family planning among some specific group remains a concern. Previous study suggests that geographical movement may pose barriers to access family planning services. In a context where migration experience is a common life event for both men and women, it is important to understand the relationship between migration and contraceptive use. Findings will help policy makers to better design family planning services to be more inclusive.

The relationship between migration and contraceptive use can be understood following the same notion of migration and fertility, two main factors affecting population growth. Theoretical notion suggests that migration may affect fertility due to four hypotheses, i.e. socialization, selection, disruption, and adaptation (Hung, 2008). Both positive and negative effects of migration on fertility have been recorded. On one hand, previous literature has supported the argument that rural to urban migration influences fertility and found that migrants have low fertility than non-migrants (Jensen & Ahlburg, 2003). A study in Vietnam finds that rural-urban migrants have lower fertility than non-migrants. The study also suggests that temporary migrants have significantly lower probability to have first child than permanent migrants (Hung, 2008).

On the other hand, past study notes that fertility level is different between low parity and high parity migrants. For both temporary and permanent migration, the low parity women are more likely to have a birth than non-migrants, while no significant effect of migration on birth among high parity women (Edmeade, 2006). Using Hubei province as a case study, a study by Yang (2001) applies three conventional hypotheses regarding migration-fertility linkage, i.e. selectivity, disruption, and adaptation, in explaining fertility differentials between migrants and non-migrants in China. The results show that temporary migrants significantly have

higher probability of having a second or higher order birth than permanent migrants and non-migrants (Yang, 2001).

1.2 Rationale and justification

The ultimate goal of family planning program is the improvement of health and socio-economical status which also including primary health care and fertility decline (the alma-ata declaration cited in Piseth, 2004). Family planning promotes lives by help women avoid unwanted pregnancies, abortion and its consequences. Decline of unintended pregnancies due to use of contraception decrease maternal and infants deaths, helps prevent unsafe abortion, and enables women to postpone births to their healthiest childbearing time. Family planning also enables couple to have safer sexual behaviors due to improvement of condom use. Family planning is also considered a main cause of general development. Slowing population growth helps protect environment to sustainable socio-economic development, not only for individuals, but also for society in general (WHO, 2010). Thus, it is essential to reassure individuals for accessible family planning services.

Although contraceptive methods are widely accessible and generally used in Thailand, there are specific groups that may encounter difficulties to access contraceptive methods. Thailand has 5.9% unmet need of contraceptive use among some ethnic minorities, Muslim, migrant workers and people who live in slum (WHO, 2003). Previous study suggests that migrants are in the situation that may have less information about modern contraception. As a result, migrants may experience unmet need for contraception or may have an insufficient choice of scientific contraceptive method during their first year in urban destination (Lindstrom & Hernandez, 2006). Therefore, according to previous studies, recent migrants should be targeted for awareness increase of modern contraception method (Lindstrom & Hernandez, 2006).

Some general reproductive health problems due to migration process are also relevant. Diseases such as sexually transmitted disease and HIV/AIDS can spread easily when population becomes more mobile (Armstrong, 1995). The probabilities of having safe motherhood in migrants and displaced peoples are lower than non-

migrants because they are exposed with less protection, poor food, poor hygiene and physical risks (Maine, 1991). Migrants may also be at high risk of getting unsafe abortion and its complications. Health service providers can help them by providing family planning counseling and contraceptive methods and by providing them opportunity to access to health services at the time of emergency crisis (Lane, 2008).

The relationship between migration and contraceptive use is not conclusive. Empirical researches indicate both positive and negative relationship. On one hand, research suggests that migrants are less likely to use contraceptive method. Some studies point out that temporary rural-urban migration will delay the urban fertility decline, because most migrants are out of the reach of family planning agencies. This problem will be exacerbated when the volumes of migrants increase (Zai & White, 1996). According to Demographic Health Survey (DHS) data, in 19 of 22 countries studied, rural-to-urban migrants were less able than urban non migrants to name at least one modern contraceptive method (Mamdani et al., 1993). In most of these countries, the differences were quite small, and in all countries at least two-thirds of migrants knew about a modern method.

On the other hand, some researchers have found that permanent rural-urban migrants have lower fertility than urban non-migrants. This is because migrants have to adjust to the norm of the lower fertility as well as to the various constraints of urban life (Goldstein & Goldstein, 1983).

Migration is a common practice of people in many countries including Thailand, a country that has successfully implemented family planning program. While factors of population change as fertility and mortality are under-control, the third factor, migration, has brought many issues related to population and reproductive health. Thailand is characterized by both international and national migrants, who are likely to have different characteristics from non-migrants. Migrants are usually more vulnerable. Most of them migrate due to some pressure including poverty, insecurity, and lack of education. Migrants are usually disadvantageous educationally and financially. Thus, they are more likely to get exposed to negative environment in

urban area. This may affect, according to previous literature, their fertility rate due to many reasons, such as less access to information about contraception and their use (Zulkifli et al., 1994).

In this study, I focus on the relationship between temporary migration experience and contraception uses in Kachanaburi Demographic Surveillance and System (KDSS). Substantial figure of migration in KDSS makes the study site a suitable place for this study. Embedded purpose of this study is to provide information for better design of family planning services that can enhance use of family planning among less access groups which in turn will improve their reproductive health.

1.3 Migration in Kanchanaburi DSS

This study aims to explore the relationship between migration and contraceptive use in a Thai setting, Kanchanaburi Demographic Surveillance System (KDSS). I use a data set from KDSS project which defines migration as a movement between villages of current residence during the 12 months prior to the census. The Kanchanaburi Project is a demographic surveillance system (KDSS) which records population changes (demographic, social, economic and health) in a study area of 100 villages/census blocks annually from 2000 to 2004. This study uses data in the fifth round census which collected data from 1st July 2003 to 28th August 2004. According to the fifth round report (Punpuing, 2004), about 75 percent of the study population was non-migrant in the year prior to Round 5, with an in-migration rate of 10 percent and an out-migration rate of 15 percent.

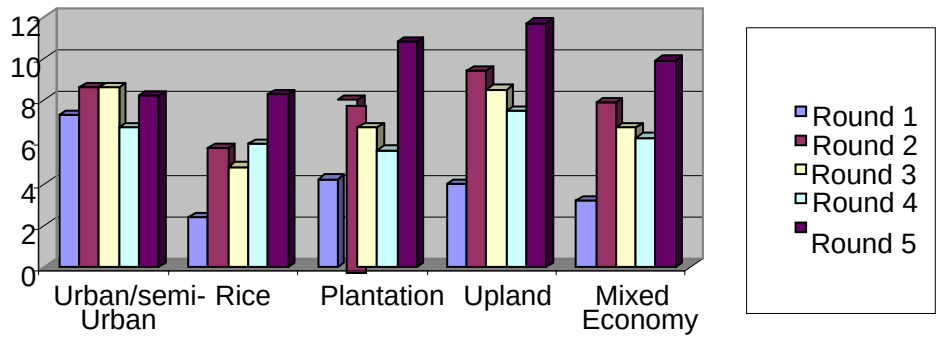

Figure 1.2 In-migration rate round 1 (2000) – round 5 (2004) in KDSS

In total, the male in-migrant rate was higher than female in-migrant rate. The in-migration rates for both males and females are high for the age group 15-19, 20-24 and 25-29, the highest in-migration are for the population age 20-24 years (Punpuing, 2004) (See Figure 1).

The out-migration rate for males was higher than that of females in every strata., The out-migration rates for both males and females are high for the age groups 15-19, 20-24 and 25-29, the highest male out-migration rate was in age group 20-24, but the highest female out-migration rate was in age group 15-19.

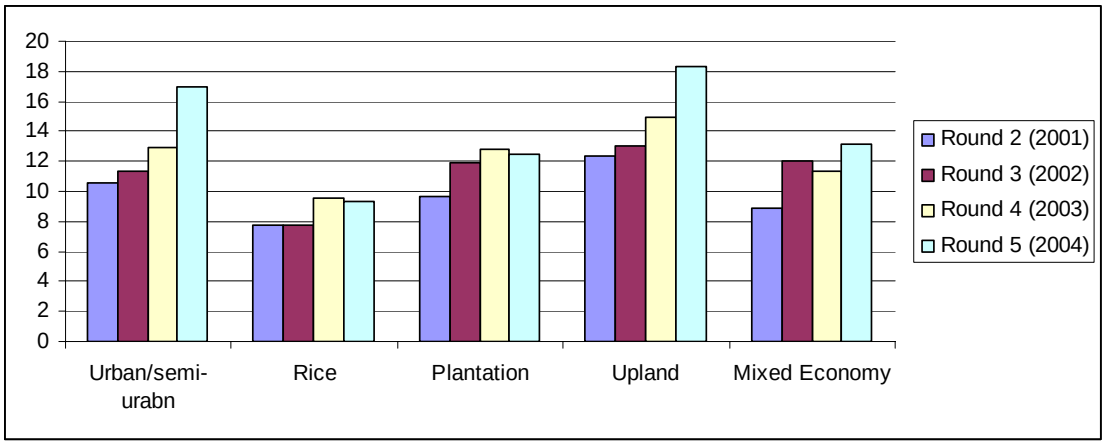

Figure 1.3 Out-migration rate round (2001) – round 5 (2004) in KDSS.

1.4 Research question

The central question of this study is whether migration experience is related to contraceptive use among reproductive-age women in KDSS, Thailand who have a high propensity to migrate taking into account of other relevant factors?

1.5 Research objective

The study aims to investigate the relationship between migration experience and contraception use among reproductive-age women in KDSS, Thailand with a high propensity to migrate.

CHAPTER II
LITERATURE REVIEW

This section depicts theoretical perspectives about the relationship between migration experience and contraceptive use. The section begins by describing roles of contraceptive use in fertility decline. I then proceed to the relationship between individuals' migration experience and contraceptive use. I also discuss what have been found in previous studies in order to make my points.

2.1 Contraceptive use and fertility decline

Relationship between fertility decline and contraceptive use is a discourse issue in many countries for a long time since the rapid population growth had become the concern of scholars and societies. Many theories and arguments relate fertility decline and contraception use. One of the prominent theories is the demographic transition theory which emphasizes the increase use of contraception, a result of socio-economic change, as a major contribution of fertility decline. The theory posits that when mortality decreased and fertility remained at same level, high population will put pressure on population to use contraception (Hirschman & Young, 1998). Other theories such as economic theory and modernization theory also attract attention of societies to contraception use and fertility decline (Yadeta, 2003). Study points out that the main cause of fertility decline in western societies is the broad availability of modern contraceptives, especially the pills, which can easily be used and control fertility (Macunovich, 2003).

2.2 Migration, fertility, and contraceptive use

It is well documented in literature that migration has linked with multiple behavioral outcomes (Goldstein, & Goldstein, 1981). Migration and fertility is a topic that has attracted particular attention within demography. In developing countries, urban population size is growing rapidly, especially among the poor countries. Continued rural-urban migration contributes sizably to this growth (40-50% of urban growth), especially since most people who migrate to the cities are young. The rise of

women in the labor force, adoption of modern ideas, increased need for child labor, and the breakdown of the extended family contribute to these changes. Factors which decrease fertility are falling proportions of people marrying at an early age, increased age at first marriage, increased spousal separation, and increased use of contraception (Mamdani et al., 1993). Regardless of type of migration, e.g. internal or international, researchers have found its significant relationship with fertility (Goldstein et al., 1997).

To understanding the relationship between migration and contraceptive can apply existing notion of the relationship between migration and fertility. There are three mechanisms through which migration may strongly influence fertility level. These three mechanisms include migrants' selectivity, migrants' disruption, and migrants' adaptation (Goldstein & Goldstein, 1983). Some studies have suggested that although selectivity and disruptive hypothesis provide important knowledge in to the ways that how migration affects fertility, a more completed understanding are essential, including a comprehensive assessment of the role of migration within the framework of life course, especially with regard to the process of family formation. Within the life course framework, the relationship between migration and fertility is dependent on life course and family formation stage. In this situation the effect of migration on fertility is differing to selectivity and disruptive hypotheses (Singley and Landale, 1988, cited in Edmeade, 2006).

According to selectivity perspective, migration process is selective of differentials in certain characteristics such as age, gender, and social class which affect how person respond to push-pull factors. These factors in turn affect their behaviors differently (Lee, 1966). Selectivity implies that migrants have different characteristics from non-migrants, including both observable (e.g. education, and age) and non-observable (e.g. motivation) that lead migrants to low fertility (Jensen & Ahlburg, 2003).

Meanwhile, disruption perspective suggests two competing result. On the one hand disruption linked with migration can cause low fertility during the physical separation of spouses (Harrison et al., 1986). Change of residence delays childbearing due to spousal separation or due to use of contraception during the time surrounding relocation (Landale & Hauan, 1996). New arrivals experience much lower fertility in their first few years in cities than long term residents of similar age and parity. This

results from the initial unmarried status of most migrants, high levels of spousal separation among new arrivals who are married, dramatic increases in use of modern methods of contraception after 2 years in cities, and continuation of traditionally long durations of postpartum abstinence (Brockerhoff, 1995).

On the other hand, disruption also can raise fertility by causing an interruption in the provision of contraceptives and by the weakening of controls on sexual behavior (Moreno, 1994).

Adaptation perspective also suggests a decrease in fertility among migrants. Adaptation of migrants to the destination area as the average fertility in destination is lower than the place of origin. This is especially mentioned in the demographic literature that posits adaptation to lower-fertility norm as an important mechanism. From economic perspective, migrants may adapt themselves and change demand for children based on changes in economic factors affecting it (e.g. women's wage, cost of childcare, and cost of fertility regulation) (Richard et al., 1985). The decline in migrant fertility is immediate and remains low indicating that the circumstances of living in an urban area in themselves are conducive to fertility behavior change and may be due to temporary spousal separation (Brockerhoff, 1994).

As the contraceptive use is one of the proximate determinant of fertility, so the perspectives of the relationship between migration and fertility is, to some extent, also applicable for understanding the relationship between migration and contraceptive use.

2.3 Previous study on migration and contraceptive use

Previous studies that directly examine effects of migration on contraceptive use are only a few and findings are not conclusive. Among them is a study by Prabal (2008), carried out in Mexico. After controlling for traditional economic variables such as income and access, the study finds the positive impact of international migration on contraceptive use. They found that migrant family women are 75 percent more likely to use contraception pills and 37 percent more likely to use condom than non-migrants (Prabal, 2008).

A macro study by Gardner, R. and Blackburn (1996) provide useful but different insights. In their multifaceted study in 22 countries, researchers show that, in general, rural-to-urban migrants are less likely than other urban residents to use contraception. This was the case in 17 of the 22 countries analyzed on the basis of DHS data. Usually, the difference was small, less than 6 percent.

Figure 2.1 Percentages of urban women in reproductive age using modern contraceptives by migration status.

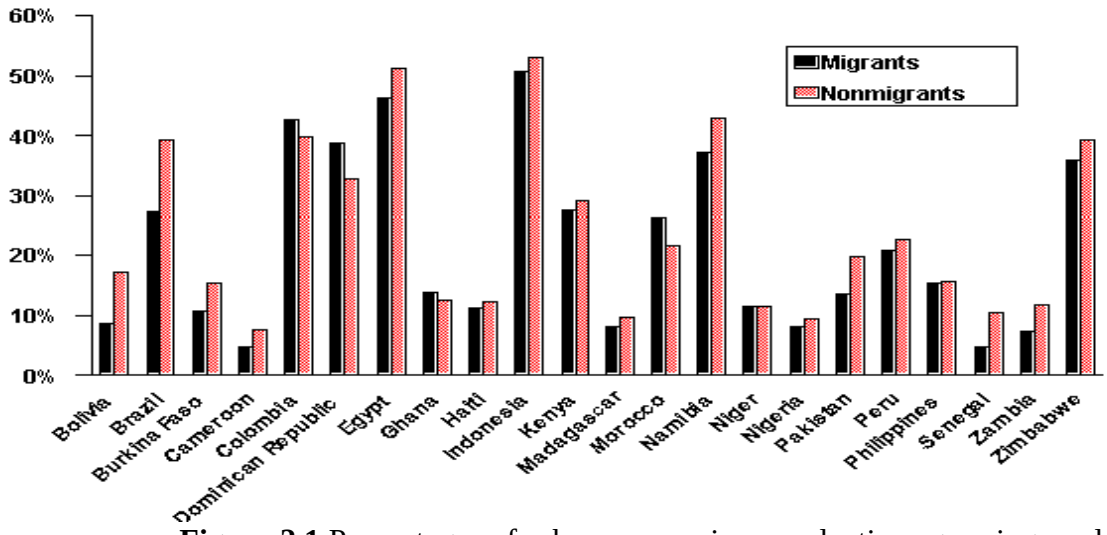

Figure 2.1 Percentages of urban women in reproductive age using modern contraceptives by migration status.

The same study also investigates an association between length of migration and contraception use. Results show that the longer duration that migrants spend in new residence, the more likely they are to adapt themselves to the native residents.

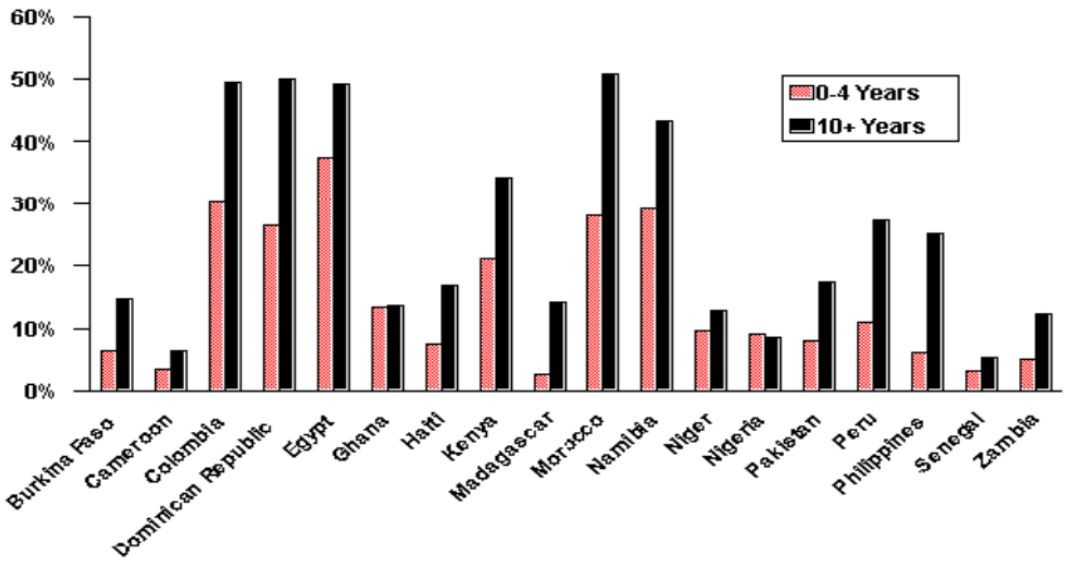

Figure 2.2 Percentages of rural to urban migrant women in reproductive ages using modern contraceptives by length of residence

Another study using DHS data for Bolivia and Peru found that native urban residents used modern methods of contraception most, followed first by long-term rural-to-urban migrants, then recent migrants, and finally rural residents who had not migrated. This pattern held true when the study controlled statistically for marital status, age at marriage, and women's education (Tam, 1994).

A study in refugee patients from Yugoslavia who attended the HIV/genitor-urinary clinic in London found that refugees have higher risk of sexual transmitted disease and HIV than other peoples. Almost half of them (48%) reported not using any kind of contraceptives. Among those who used contraceptives, 32.7% used condoms and 27.8% used combined oral contraceptives. Overall, these findings indicate that refugees from the former Yugoslavia have a number of unmet sexual health needs, especially women, who have a high incidence of past induced abortion, a failure to access cervical screening programs, and a need for contraception (Newell et al., 1998).

Soe and Somrongthong (2008) study contraceptive use between Burmese women in Myanmar and Burmese women who moved to Phang-Nga province in Thailand. The contraception prevalence rate Burmese women in Myanmar from 2002-2006 was 37%, while contraception prevalence rate among Burmese women who moved to Phang-Nga province are 80.1%. Most of them use injection and followed by oral pills than other method 46.2% and 39.9% respectively. Because of their illegal status, most of them were afraid of police arrest, thus they choose injection which was sufficient for three months and the method was readily available. The study also notes about the needs of those migrants for supply of contraception with affordable price and information about family planning (Soe & Somrongthong, 2008).

Other existing studies mostly explore contraceptive behavior among migrants without comparing with non-migrants. For example, a cross-sectional study conducted in Maesot, Tak province, Thailand has explored the relationship of contraception use and socio-demographic characteristics, knowledge, attitude, availability and accessibility of contraception. Results show that contraception prevalence rate among Myanmar married migrants women of reproductive age is 72.97%. The main cause to use contraception is their poor economic condition. More than half of the study women had fair knowledge about contraception, and good attitude toward contraception. This research also realized that there was a significant relationship between husband agreement and contraception use and cost of the service. The study indicated that counseling and effective communication and perfect strategies are necessary to enhance contraception use among Myanmar married migrant women who are in reproductive age (Thwin et al., 2008).

In the context outside Thailand, most study also pay attention on contraceptive use among migrants. One study in Guatemala has shown that the migrants' contraception knowledge is positively associated with the number of year they have spent in rural area. The study also indicates that migrants who got knowledge about contraception are more likely to use contraception than who have not contraception knowledge (Lindstrom & Hernandez, 2006). Another study of contraception among North African women who migrated into France has shown that

the socioeconomic status of the women is generally very low, the request for contraception was only 14%, and parity is not high. The resistance toward contraception comes from a traditional way of life in which the husband is the absolute master and from a misinterpretation of the rules of the Koran (Blanc & Merger, 1982).

Another study uses a sample of 117 immigrant women from Soviet Union countries in Israel to investigate the past and current use of their contraception (Cwikel et al., 1994). The research shows that induced abortion was very common practice before immigration. About 58% percent of the sample had at least one induced abortion and the average was 2.7 induced abortions. The most frequently used family planning methods in the past were oral contraception (33.7%), safe days (24%), withdrawal (15.3%), and IUD (15.3%). Only 4% used condoms in the past. Meanwhile, the figures of their current situation at the survey time are IUD (23%), safe days (23%), withdrawal (18.3%), and condoms (13.5%). Only 2.9% currently used oral contraception (Cwikel et al., 1994).

2.4 Other factors influencing contraceptive use

To understand whether migration is related to contraceptive use, it is important to understand other factors that affecting contraceptive use in order to include them as control variables. As contraceptive use is a long-time topic of interest for demographers, numerous researchers have documented variables related to contraceptive utilization including socio-economic characteristics of individuals, and accessibility to and availability of contraceptive method. A study carried out in Pakistan has examined the effect of socio-cultural and supply factor on contraceptive use. The study found that in addition to the expected positive relationship between women’s age, number of living children, education, place of residence and contraceptive use, it is theorized that there are five other factors significantly influencing contraception use in Pakistan. These include the extent of communication between husbands and wives, religious beliefs, female autonomy, son preference, and the family planning service and supply system (Mahmood, 1996).

In the U.S., study finds that the most important factors affecting the contraceptive use are age, poverty, race, education, influence of cultural belief, inadequate knowledge about family planning, and accessibility to service. Studies point out that most of young women age 15-19 do not use contraception. Poor women can not pay for contraception and their transportation to access is difficult. Black women are less likely to use contraception than white women. And those women with low educational level and insufficient information about family planning are less likely to use contraception (Sable et al., 2000).

2.5 Conceptual framework

Migration, fertility, and contraceptive use are a long time research topic in demography work. According to previous literatures migration affects fertility through selectivity, disruption, and adaptation mechanisms. As contraceptive use contributes greatly to fertility, the perspectives on migration and fertility can be applied to the study on the relationship between migration and contraceptive use. In this study, I focus on temporary migration experience as the main independent variable influencing contraceptive use in KDSS context. Past study also suggests that several demographic, socio-economic factors, cultural beliefs, accessibility and availability affect contraceptive use. To explore net effects of migration experience, I take into account effects of age, education, working status, numbers of living children, ethnicity, strata, health status and house hold asset as control variables of the contraception use. The dependent variable is contraception use, measured as use of contraception and not use of contraception.

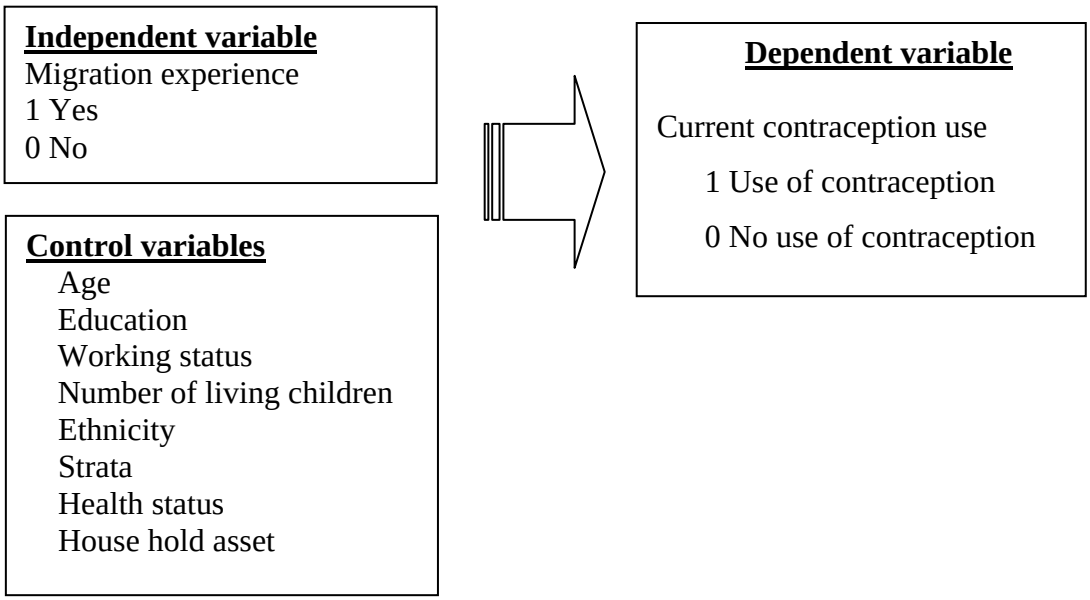

Figure 2.3 Conceptual framework

2.6 Hypothesis of study

Past literature suggests both positive and negative relationship between migration experience and contraceptive use. However, in the context of the study setting and the nature of temporary migration experience this study focuses, it seems that disruption perspective is relatively more applicable compared with selectivity and adaptation; migration can disrupt continue use of contraception. Therefore, I hypothesize that women with temporary migration experience are less likely to use contraception than women with no migration experience.

CHAPTER III
METHODOLOGY

3.1 Source of data, study site, and study sample

To answer my research question, I use a secondary data set from the Kanchanaburi Demographic Surveillance System (KDSS), conducted by the Institute for Population and Social Research (IPSR), Mahidol University. One of the main objectives of Kanchanaburi project is to create a longitudinal database that can be used to address research questions of how socio-economic and environmental changes affect population dynamics. Since 2000-2004, the project annually collected data using a population census for every household and for every individual aged 15 year and over in each villages/block in the study area. Each individual in each household has their own code called the individual code. The method used for data collection was face-to-face interviews using three sets of structured questionnaires: village, household, and individual. The data which I will be using is mainly from individual part of the 5th round survey just one question from household part, the data collection started on July 1st 2003 and ended on August 28th 2004. The individual questionnaire was used for respondents aged 15 and over. It consisted of seven sections: personal data, migration, fertility, health behavior, experience and perception towards care and support for the elderly, future security, and specific question about health status and disability

The study site, Kanchanaburi, is the third largest province in 76 provinces in Thailand. Kanchanaburi represents an ideal setting for the objective of KDSS. Because of its geographical location that borders Myanmar, movement between Kanchanaburi and Myanmar is common. This has a profound impact on people's lives in various dimensions including health and cultural assimilation.

The study sample of this study includes currently married women in KDSS aged 20-34. This age range is selected because it is the age at which both contraceptive use and migration experience usually take a peak level.

3.2 Unit of analysis

The unit of analysis for this study is individual.

3.3 Operational definition of variables (Measurement)

I use the contraceptive method choice as dependent variables, and I classify them in two categories, as use of contraception and no use of contraception. Definition, scale of measurement for variables included in the analysis, the dependent variable, the independent variable and the control variables.

Table 3.1 Operational definition of all selected variables

Variables	Description	Level of measurement
Dependent variable Contraceptives use	This variable identifies whether a woman currently use a modern contraceptive at the time of interview. Using traditional contraceptive methods including withdrawal and rhythm methods is considered not currently use contraceptive method.	Nominal scale 1= Currently use contraceptive method 0 = Not use contraception
Independent variable Temporary migration experience	Temporary migration experience in this study is defined as staying away from usual residence for at least one month in the past 12 months prior to the survey. Those with migration experience include all return migrants and new comers.	Nominal scale 1=Ever moved 0=Never moved
Control variables		

Age	Age of the study sample ranged from 20-34. People in this ages group have higher tendency to migrate and use contraception. This variable is measured at nominal scale rather than a singe age to show effect of cohort.	Nominal scale 1 = 20-24 2= 25-29 3= 30-34
Ethnicity	Whether a woman is Thai or non-Thai is distinguished using self-report about their ethnicity.	Nominal scale 1 = Thai 0 = Non-Thai (Burmese, mon, Karen, Thai yai, Lao, Khmer, Yuan/Vietnam, Chinese, Bangladesh, Yao/Muser, Indian, Nepal, American, and others)
Women's education level	This is a completed level of education.	Ordinal 1 = No school 2 = Primary education 3 = >Primary education
Total number of living children	This variable refers to the number of current living children, both male and female of married women. These children whether they do not stay with their parent.	Nominal 1 = 0-1 child 2 = Two children 3 = More than two children
Working status	This variable identifies women's work status at the time of interview. Women who looked for a job, study, do not work, or house wife are included as not working.	Nominal 1 = Working 0 = Not working
Health status	Their chronic disease at least three	Nominal scale

	months or more	1=Yes 0=No
House hold assets	There are total 18 household assets included in this variable. An asset owned is scored 1 and added up. Thus, the variable ranges from 0-18. All women are then ranked and broken into 3 groups roughly equally. Women in the bottom group (0-33%) is considered living in poor household, in the middle (33- 66 %) for moderate household, and the top (>66%) as rich household. are considered in the poor group.	Ordinal scale 1 = Poor 2 = Moderate 3 = Rich
Strata	This variable is based on 5 strata of Kanchanaburi DSS.	Nominal scale 1 = Urban/semi-urban 2 = Rice 3 = Plantation 4 = Upland 5 = Mixed

Note that in statistical multivariate analysis, nominal scale and ordinal scale with more than 2 categories is constructed to be dummy variables.

4.4 Data analysis

This study presents findings using both descriptive analysis and inferential analysis. In descriptive analysis, for variables measured at nominal scale, I use percentage to show patterns of variables. I also use a cross-tabulation and chi-square test to show possible relationship between the main independent variable and the dependent variable. Cross-tabulation with chi-square test between each control variable and the dependent variable is also presented.

As for statistical analysis, since the dependent variable is two categories I use binary logistic regression to estimate the likelihood of using contraceptive method. The odds ration higher than one of a given independent variable indicates the positive relationship or increasing the likelihood of using contraceptive status. The odds ratio lower than one of a given variable, by contrast, implies the negative relationship or reducing the likelihood of using contraceptive method, relative to the reference group of the dependent variable.

3.5 Data limitation

Since this study is a cross-sectional, findings should be interpreted with cautions, especially in terms of causal relationship. Contraception use in this study includes both long-term/permanent (sterilization, IUD and Norplant) and short-term methods. It is possible that women may apply these methods before migration occurred. Therefore, the causal analysis could not be applied here.

CHAPTER IV
FINDING AND DISCUSSION

4.1 Findings

This chapter presents the findings of study and contains three parts. The first part describes background characteristic of the study sample. The second part examines possible relationship between each independent variable and the dependent variable using cross-tabulation and chi-square test. The third part presents the results from multivariate analysis using binary logistic regression to show the effects of the main independent variable, i.e. migration experience, on the outcome variable controlling for other selected explanatory variables. At the end of the chapter, overall discussion from the findings based on theoretical framework, empirical studies, and research hypotheses is provided.

4.1.1 General characteristics of the Study Sample

The percentage distribution of the study sample (married women aged 20-34) by the dependent variable, i.e. current contraceptive use, is described in Figure 4.1. The figure shows that nearly four fifths of women in the study sample (78.2%) are using contraception, while a little more than one fifth (21.8 percent) are not using contraception at time of the survey.

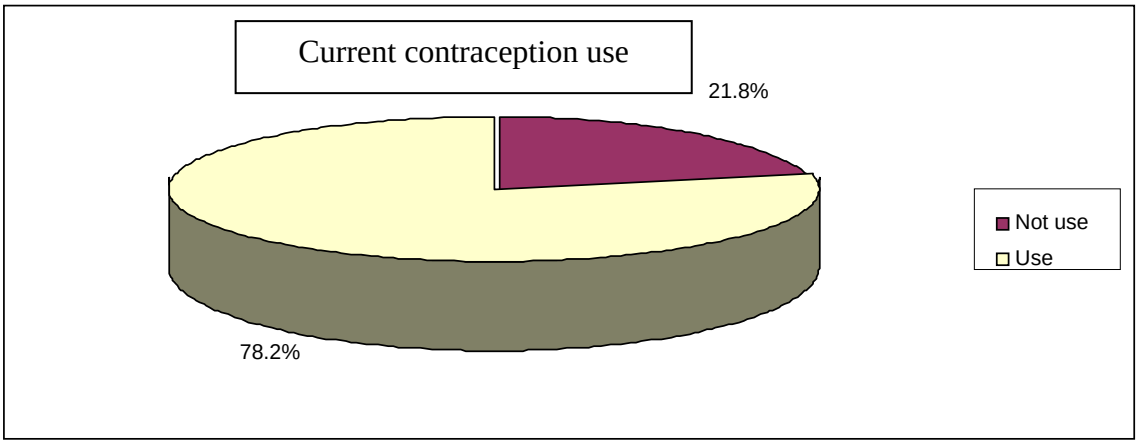

Figure 4.1 Percentage distribution of married women aged 20-34, in selected study sample, by current contraception use

Figure 4.2 describes the percentage distribution of the study sample by their migration experience, the main independent variable in this study. Results reveal that more than three fourths (76.2%) of the study sample have no migration experience and about 23.8 percent have migration experience.

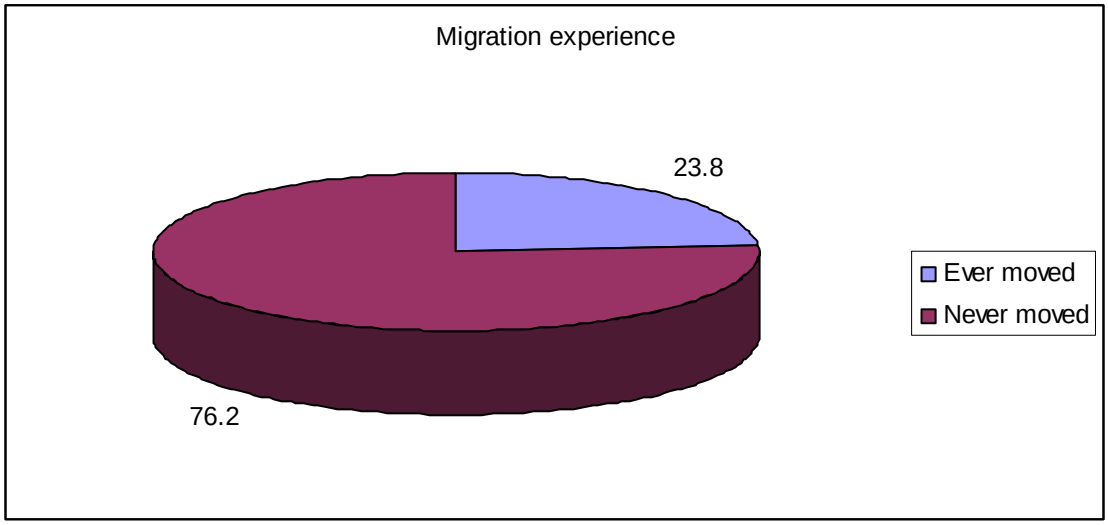

Figure 4.2 Percentage distribution of married women aged 20-34 by migration experience

Next, I present the percentage distribution of the study sample by other selected characteristics including age, education, working status, health status, ethnicity, residence, number of living children, and household assets. As seen in Table 4.1, the majority of married women (42.5%) are between ages of 30-34 years. Women in age group of 20-24 constitute the lowest (22.5%) proportion. The rest of the study sample (35.0%) belongs to middle age group (25-29). Considering to educational level, the study found that more than half of women (53.6%) attained their education of primary level. Nearly one third (32.3%) reaches up to secondary or higher than secondary education. About 14% are not educated. In terms of working status, results indicate that most of women (71.9%) are working, while 28.1 percent are not.

For health status, measured as chronic diseases, about 21.8 percent of women suffer from some chronic diseases and 78.2 percent do not. The majority of women (82.9%) in the study sample are Thai and about 17.1% percent are those reported as non-Thai. As for the residential area, the KDSS identifies residence into

five strata. Descriptive findings show that the study sample lives in upland stratum in the highest proportion (31.4%) and in rice stratum in the lowest proportion (14.7%). The remaining lives in urban stratum (16.4%), plantation stratum (16.2%), and mixed economy stratum (21.3%).

Almost half of the study women are childless or have only one child (48.4%). The second largest group of women is those who have two children (35.7). Women who have more than two children account for 16 percent. As for economic status, women are classified into equal three groups, poor, moderate and rich.

Table 4.1 Percentage and frequency distribution of respondents by the using of selected characteristics.

Characteristics	Percent (%)	Frequency (n=3,422)
Age		
20-24	22.5	769
25-29	35.0	1,198
30-34	42.5	1,455
Educational level		
No education	14.1	481
Primary education	53.6	1,835
> than primary education	32.3	1,106
Working status		
Working	71.9	2,461
Health status		
Have disease	21.8	746
Ethnicity		
Thai	82.9	2,838
Strata		
Urban/semi-urban	16.4	562
Rice field	14.7	502
Plantation	16.2	554
Uplands	31.4	1,075
Mixed economy	21.3	729
Number of living children		
No children + one child	48.4	1,655
Two children	35.7	1,220
More than two children	16.0	547
Household assets		
Poor	33.6	1,150
Moderate	33.6	1,151
Rich	32.8	1,121

4.1.2 Possible associations between migration experience and other characteristics and contraceptive use: Results from bivariate analysis

Table 4.2 presents results from the bivariate analysis of currently married women between current contraception use and each of selected characteristics. Results show that women who have never migrated in the previous year use contraception in a higher proportion than women who ever migrated (80.3% and 71.4% respectively). Using Chi-squared test, results indicate that migration experience is significantly associated with contraception use at 0.001 level. Regarding to age, there is a strong association between age and contraception use with the p-value of 0.001 level. The proportion of women using contraceptives is highest (80.8%) in age group 30-34 and lowest in age group 20-24. The younger the women, the lower they are to use contraception. The proportions of using contraception use in age 25-29 and 20-24 are 78.8% and 72.3% respectively. Chi-squared test also shows that educational level has a significant association with contraception use at 0.001 level. Women who completed primary educational level use contraception in the highest proportion (82.6%) compared to those completed higher than primary educational level (75.1%) and women with no education level (68.6%). Considering contraceptive use by working status, findings suggest that working women use contraception more than women who do not working (82% and 68.6% respectively). This association is significant at 0.001 level.

As for ethnicity, results from Chi-squared test indicate that ethnicity is significantly associated with contraception use at 0.001. Descriptive figures show that Thai women use contraception more (80.8%) than non-Thai women (65.4%). By contrast, according chi-square test, health status is not significantly related with contraception use. Household economic status is associated with contraception use significantly at 0.01. Women living in poor household have the lowest contraception use rate (75%), while women in household with moderate economic status have the highest contraception use rate (81.3%). For women in rich household, the contraception use rate is 78.2 percent, which is between the poor women and women in moderate economic status household. Another significant variable associated with

contraception use at 0.001 level is number of living children. Women who have two children have the highest (89.3%) contraception use rate, while women with no children or with one child have the lowest contraception use rate (68.4 %), women who have more than two children their contraception use rate is 83.2 percent. Residence also has a significant association with contraception use at 0.001 significant level. Women who stay in plantation strata have the highest contraception sue rate (82.1%), whereas women who stay in upland strata have the lowest contraception use rate (72.9%). The contraception use rates are 81.5 percent for women in rice field stratum, 80.1 percent for women in urban stratum, and 79.3 percent for women in mixed economy.

Table 4.2 Percentage distribution of study women's migration experience and other characteristics by contraceptive use: Results from bivariate analysis

Characteristics	Current contraception use		
	Not use	Use	Total
Migration experience* **			
Never moved	19.7	80.3	100.0 (2,607)
Ever moved	28.6	71.4	100.0 (815)
Age groups* **			
20-24	27.7	72.3	100.0 (796)
25-29	21.2	78.8	100.0(1,198)
30-34	19.2	80.8	100.0 (1,455)
Educational level* **			
No education	31.4	68.6	100.0 (481)
Primary education	17.4	82.6	100.0 (1,835)
> Education	24.9	75.1	100.0 (1,106)
Working status* **			
Not working	31.4	68.6	100.0 (961)
Working	18	82	100.0 (2,461)
Ethnicity* **			
Non Thai	34.6	65.4	100.0 (584)
Thai	19.2	80.8	100.0 (2,838)
Health status			
Have not disease	21.3	78.7	100.0 (2,676)
Have disease	23.5	76.5	100.0 (746)
Household assets **			
Poor	25.0	75.0	100.0 (1,150)
Moderate	18.7	81.3	100.0(1,151)
Rich	21.8	78.2	100.0 (1,121)
Number of living children***			
No child + one child	31.6	68.4	100.0 (1,655)
Two children	10.7	89.3	100.0 (1,220)
More than two children	16.8	83.2	100.0 (547)
Strata * **			
Urban/semi-urban	19.9	80.1	100.0 (562)
Rice field	18.5	81.5	100.0 (502)
Plantation	17.9	82.1	100.0 (554)
Upland	27.1	72.9	100.0(1,075)
Mixed economy	20.7	79.3	100.0 (729)

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

4.1.3 Association between migration experience and contraceptive use: Results from logistic regression

To investigate whether migration experience in the past 12 months is significantly related to contraceptive use taking into account of other variables simultaneously, the binary logistic regression is applied. In this multivariate analysis, contraception use is treated as the outcome variable (dichotomously measured: 1= currently use contraception; and 0=not currently used contraception. Migration experience (1=moved; 0=did not move) is considered as the main independent variable. Age, education, ethnicity, working status, strata, household assets, health status, and number of living children are control variables. In multivariate analysis, all variables which have more than two categories are changed to two-category variables with 0 and 1 values or dummy variables. Migration experience may have different effects on contraception upon other variables are taken into account. Therefore, three models in logistic regression are explored. For each model, the odds ratio, standard error, log likelihood and significance level of independent variables are shown in the table. In Model 1, only migration experience is included as the independent variable to predict contraception use. In Model 2, ethnicity, working status, health status, age, education, strata and household assets are added in addition to migration experience. Model 3 adds to Model 2 the number of living children.

Model 1 highlights the negative effects of migration experience on contraception use. The reference group is non-migrants. The odds ratio is 0.61, significant at 0.001 level. According to Model 1, migrants are 39% less likely to use contraception than non-migrants, when other variables being equal. This finding supports my study hypothesis.

When other explanatory variables are controlled in **Model 2**, results prove that migration experience remains significantly associated with contraception use ($p < 0.001$). Regardless of age, education, working status, ethnicity, health status, household economic status, and residential area, women who have ever moved in the previous year are 30% less likely to use contraception compare to those who never moved.

When number of living children is added into **Model 3** as a control variable, results again confirm the significant association between migration experience and contraception use. After controlling for all independent variables, findings indicate that women who have ever moved are 24% less likely to use contraception than those women who have never moved in the year prior to the survey. The association is significant at 0.01 level.

Effects of control variables are worth noting. Ethnicity has a strong association with contraception use in all models. Taken Model 3 as a complete model, the odds ratio of ethnicity is 2.2 and significant at 0.001 level, meaning that Thai women are 2.2 times more likely to use contraception than non-Thai women. Working status is highly associated ($p<0.001$) with contraception use. The odds ratio of working status in Model 3 is 2.03 which means that women who work are approximately 2 times more likely to use contraception than their counterpart. A significant association between heath status and contraception use is found in Models 2 and 3. In Model 3, the odds ratio of health status is 0.77, significant at 0.05 level. This can be read that women who have some chronic disease are 23% less likely to use contraception than those who have not disease.

Even though age is not significant in the second model, by adding number of living children, effects of being in age group 30-34 becomes significant. So, women aged 30-34 are 31% less likely to use contraception than women aged 20-24. The odds ratio of age group 30-34 is 0.69, significant at 0.01 level. The multivariate analysis shows that residential area, educational level, and household assets have no association with contraception use both in the second model and third model.

Number of living children has a strongest effect on contraception use. There is a positive relationship between number of living children and contraception use. The odds ratios equal 4.47 for having two children and equal 3.91 for having more than two children. Women who have two children are 4.4 times more likely to use contraception than those women who have not children and or have only one child. At

the same time, women who have more than two children are 3.9 time more likely to use contraception than those women who have not children or have one child.

I also explored using different way of categorizing number of children to: 1 = no child, 2 = 1-2 children and 3 = more than two children. Results show that women who have more than two children more likely than other groups to use contraception. The analysis shows that women who have one to two children are 6.7 times more likely to sue contraception than women who have no children. And women who have more than two children they are 10.8 times more likely to use contraception than women who have no children. Both groups are significantly associated at 0.001 level.

Table 4.3 Odds ratio from binary logistic regression of variables associated with contraceptive use

Characteristics	Model 1	Model 2	Model 3
	Odds ratio (S.E)	Odds ratio (S.E)	Odds ratio (S.E)
Ever moved	0.61(0.06)***	0.70 (0.07)***	0.76 (0.08)**
Thai		2.06 (0.34)***	2.23 (0.38)***
Working		1.77 (0.16)***	2.03 (0.20)***
Have disease		0.79 (0.08)*	0.77 (0.08)*
Strata (Ref: Urban)			
Rice field		0.94 (0.15)	0.92 (0.15)
Plantation		0.90 (0.14)	0.87 (0.14)
Upland		0.88 (0.13)	0.74 (0.12)
Mixed economy		0.87 (0.13)	0.86 (0.13)
Age group			
Age group 25-29		1.23 (0.14)	0.93 (0.11)
Age group 30-34		1.24 (0.14)	0.69 (0.09)**
Education			
Primary education		1.20 (0.19)	1.27 (0.21)
>Primary education		0.76 (0.14)	1.04 (0.19)
Household assets			
Moderate		1.00 (0.12)	1.03 (0.13)
Rich		0.81 (0.11)	0.85 (0.11)
Number of living children			
Two children			4.47 (0.52)***
> Two children			3.91 (0.95)***
Log likelihood	-1780.54	-1711.44	-1606.16
Model Chi-square	27.68	165.88	376.43
N	3,422	3,422	3,422

*** $p < 0.001$ ** $p < 0.01$ * $p < 0.05$

S.E = Standard error
Ref = Reference

Table 4.4 Odds ratio from binary logistic regression showing effects of number of living children on contraceptive use

Number of living children (Ref: no child)	Odds ratio (S.E)
One to two children	6.78 (0.87)***
> Two children	10.83 (0.2.00)***

Note: Other variables as in Model 3 of Table 4.3 are also included. Odds ratios of other variables are not shown in this table.

*** p < 0.001 ** p < 0.01 * p < 0.05, S.E = Standard error, Ref = Reference

4.2 Discussion

Based on previous literature, the study assumes that the demographical and socio-economical factors might be related with contraceptive use. Furthermore, socio-demographic variables are controlled to take into account the fact that contraception use may be different between migrants and non migrants due to different characteristics. Percentage and frequency distribution, cross-tabulation with chi-square test and binary logistic regression are performed in the data analysis.

As mentioned in the previous chapter, migration experience in this study is rather temporary than long-term. According to adaptation, selectivity and disruption perspectives, how migration experience affects contraception use depends on, among other things, length of being away. Previous studies found that migrants who spend a long time in place of destination might adopt norms of new residential area, resulting in lower fertility and higher contraceptive use compared to non-migrants (Omondi and Ayiemba, 2003). Few researches about temporary migration experience and its effect on contraception use are done. Among them, studies found that migrants are less likely to use contraception than non-migrants (Lindstrom and Hernandez, 2006; Katie et. al, 2010).

The findings are not only consistent with the study's hypothesis, but also with some previous study. My study shows that women with recent migration experience are less likely to use contraception. Thus, temporary migration has a negative impact on current use of contraception. Past studies show that low utilization of contraceptive method due to some reasons contributes to reproductive health

problems, e.g., women who don't use enough contraception they are more likely to expose unintended pregnancies, Obstetric complications and abortion-related morbidity and mortality, maternal hemorrhage, maternal sepsis, unwanted births, hypertensive disorder of pregnancy, obstructed labour and other maternal condition (Collumbien et al., 2004). And in addition other study found that non use of contraception is leading to increase maternal and fetal mortality and morbidity, and also can cause of low birth weight and premature birth of baby. It is noted that some type of gynecological cancers and sexually transmitted disease especially HIV/AIDS is due to less use of contraception (Costa, 1995).

Therefore, a relative low utilization of contraceptive method among women who had ever moved out of their usual residence should be a concern for researchers, health practitioners as well as policy makers.

Through what mechanisms that migration leads to the lower use of contraception among women recently moved out is an important issue to understand. Although to explain this issue is out of the scope of this study, potential explanation is worth discussing. Most of migrants who either internally moved generally from rural to urban areas or across national borders are in search for work opportunities. Yet, there are also those who moved to flee from feeling disorder and danger at home. These migrants are facing many troubles, are suffering and vulnerable.

Because migration experience captured in this study is temporary in nature, the negative effects of migration on contraceptive use may be explained by disruption perspective rather than adaptation. It is possible that, for most migrants, their spouse do not accompany them, so they do not need to use contraception. Therefore disruption may affect migrants' contraception use. Contraceptive use of migrants may also be interrupted due to limited access to family planning services when away from home, thus obstructing from continuous use of contraceptive method.

Effect of long-term migration and short-term or temporary migration move to is likely to be different. As the length of migration experience potentially influence

contraception use, when people migrate from rural to urban area, their reproductive health behaviors at the beginning are different from long-term urban residents. But if they spend long time in urban area, their more behaviors become closer to other urban residents However if migrants stay at the destination for only a short period, we might not see the adjustment as found in case of long term migration (Gardner & Blackburn, 1996).

For immigrants, many reasons may lead to less contraceptive use including impaired access to health care, out of reach of family planning program, poverty, language, illiteracy and jobless. All mentioned factors limit migrants' access to contraceptive and disable them from using.

A study shown that there is no difference in the attitude between migrants and urban residents but the cause that they use less contraception is the accessibility to contraception and health services. Rural-to-urban migrants have to trip at least one hour to get modern contraceptives (Gardner & Blackburn, 1996).

Migrants encounter numerous barriers to medical care, including lack of transportation and insurance. Migrants may also have and no intention to receive treatment due to fear of wage or job loss and language barriers between migrants and health care providers. In addition Illiteracy will limit their knowing about written information for instruction how to improve health status (Hansen, 3003). For the government, it is difficult to put into practice their rules on migrants because they are not easy to contact (Hansen, 2003).

Some factors can indirectly influence migrants' appropriate decision about their health status, although this is not directly affects contraception use. A study reveals that the cultural background plays an important role in predisposing some immigrants to some diseases such as depression, chronic anxiety, and neuroses. Alcohol and drug abuse may also be used as coping responses that in fact pose migrants to some health problems. These problems put migrants at high risk to make wrong decision on regular contraception use. (Carballo & Nerukar, 2001).

Previous study also explains that migrants' unmet needs of contraception are higher than non-migrants due to some barriers and limitation to health services. A projected there are 525 million couples living in the world experience an unmet need for contraception, in spite they want to use contraception, but they don't use it (Potts et al., 2009). Social challenges to its use, Poor access to services, poor information, incomplete method choice, financial costs, and health workers bias are among the main causes of unmet need for contraception (Casterline & Sinding, 2000; Campbell, Sahin-Hodoglugil & Potts, 2006). So we assume that, these problems are also applicable for those migrants who living in Kanchanaburi Demographic surveillance and system (KDSS) area.

In addition to effects of migration on contraceptive use, the study found that Thai women are more likely to use contraception than non-Thai women. This reflects limitations to access health services in general and family planning services in particular among women considered themselves as non-Thai in terms of ethnicity. Some of these non-Thai women are those immigrants. It should be noted, however, that although the prevalence rate of contraceptive use among women who came to Thailand is lower than Thai women, it is probably higher than of women in their country of origin. As noted in one study that the practice of contraception use among migrant women from Myanmar increased from 37% in 2001, when they were in Myanmar, to 80% in 2008 (Soe & Somrongthong, 2008).

Contraceptive use is associated with number of living children. Results suggest that women who have two children are more likely to use contraception than other groups. This reflects no extra desire for children among this group. Descriptive analysis reveals that women with 2 children did not move in the previous year in a higher proportion than did women in other groups. The proportion is 17.7/28.4 and 17.7/23.6 for women who have two children/ women with no child or one child and for women who have two children/ women who have more than two children respectively.

Omondi and Ayiemba in 2003 in their study also found the significant association of number of living children with contraception use, they found that with the increase of number of living children the contraception use rate is raising. The related study is done among Myanmar migrants in Thailand and showed that contraception is more likely to be used by women with less than two or equal to two children and prevalence is decreased among the women who had more than two children (Khaing, 2002). The number of living children influence contraception use significantly but in a different way based to the context and social norm. A study conducted in Indonesia showed women who have three or more children are more likely to use contraception than those women with two or less children. But the women living with five or more children are less likely to use contraception than same reference group because they are older or might are less fertile. (Schoemaker, 2005).

Based on results from this study, contraception use is not significantly associated with education, age, residential strata, and household assets, factors found significant in other studies (e.g. Omondi & Ayiemba, 2003; Mahmood, 2000).

CHAPTER V
CONCLUSION AND RECOMMENDATION

5.1 Conclusion and summary of findings

Scholars have advanced several competing migration theories to explain observed associations between migration and the use of contraception, including the adaptation, disruption, and selection hypotheses. This is a cross-sectional analysis using the 5th round data set of Kanchanaburi Demographic Surveillance System (KDSS), Thailand. The objective of this study is to investigate the relationship between migration experience and contraceptive use among women aged 20-34 in KDSS study area. This age group is focused because of its most active reproductive as well as migration behaviors. Migration experience in the year prior to the survey is regarded as the analysis's independent variable and current use of contraception as the dependent variable. Other selected explanatory variables are described as control variables. Despite the substantial improvement of National Family Planning program of Thailand, migrant women have some limitations to use or to continue using of contraception. Although the lower use of contraception will not affect the general stability and progress of Thailand family planning program, but it can create some reproductive health problems to recent migrants, especially fertility and mortality changes of this particular population.

Descriptive statistic, bivariate analysis and multivariate analysis (binary logistic regression) have been preformed in this study. The descriptive statistic indicates that contraception prevalence rate among selected sample is 78.2 percent. As for migration experience, 23.8 percent of selected women have migration experience in the past 12 months. Results from bivariate analysis indicate that, except for health status, all selected explanatory variables have significant association with contraception use. Of particular interest, bivariate analysis results show that migrants use contraception less than non-migrants. In addition, my study reveals an association between contraceptive use and ethnicity, working status, strata, age, education, household assets, and number of living children.

Using multivariate analysis, i.e. binary logistic regression, the study for the most part confirms results from the bivariate analysis, although somewhat different results are found. Consistent across all three models in logistic regression, results confirm my study hypothesis that women aged 20-34 who had migration experience in the previous year prior to the survey are less likely to use contraception than their counterpart. This result held true after taking in to account of ethnicity, education, age, working status, health status, number of living children, household assets, and strata. As for control variables, unlike results from the bivariate analysis, findings from the multivariate analysis show no association between contraceptive use and strata, education, age, and household assets. By contrast, the association between contraceptive use and health status, insignificant in the bivariate analysis, becomes significant in logistic model. In addition ethnicity, work status, and number of living children significantly influence the probability of using contraceptives. The study has shown that generally Thai women are more likely to use contraception than non Thai women. Working women are more likely to use contraception than women who are not working. Women with good health status, i.e. free from some chronic disease were more likely to use contraception than those women who have some chronic diseases.

The number of living children strongly influences the contraception use. The study found that with the increased number of children the contraception use rate is also increasing. It provides the understanding on actual family size and its effects on the decision to use contraception and the intention to have extra births.

This study reflects the disruptive effects of migration experience on contraceptive use. Therefore, migrants may be vulnerable of getting risky behaviors due to limited use of contraception. Migrants may be under some conditions which limit use or access to use contraception while away from usual residence. This may include limited access to health facilities including. As discussed in literature part, disruption may lead to less use of contraception for temporary migrants through the

physical separation of spouses and interruption in the supply of contraceptives (Harrison et al., 1986 & Moreno et al., 1994).

5.2 Recommendation

Based on results of this study, the following suggestions may be considered to encourage use of contraceptive methods among women with migration experience.

5.2.1 Recommendation for policy

1. Findings suggest a need to expand health services to be more inclusive and more sensitive especially to women away from usual residence. The service should integrate informational and encouragement issues with respect to family planning in order to facilitate migrant women for a widespread practice of contraception.

2. According to the multivariate finding Thai women are more likely to use contraception than non Thai women. This indicates that the Ministry of Public Health and all Government Organization and Non Government Organization (NGO) should pay more attention to non Thai women.

5.2.2 Recommendation for further research

1. While this study only focuses on the association between contraception use and the temporary migration experience, literature indicates that the length of migration experience affects the contraception use. To more comprehensively understand impacts of migration, e.g. how migrants adapt themselves with new residential area, further study should explore impacts of migration on contraception use taking into account of duration of being away from usual residence, e.g. temporary and permanent migration experience.

2. This study has only considered the current contraception use of women, it would be more thorough if the study also considers the previous contraception use,

before migration. The insight will help reveal the net difference of contraception use by migration experience.

3. This study has assessed only some independent variables that have effects on contraception use. Further study needs to take into account of some other important variables such as access to health services, reason for not using contraception, and how much information about family planning women have.

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APPENDICES

APPENDIX A

Figure A1 map of Kanchanaburi, Thailand

APPENDIX A

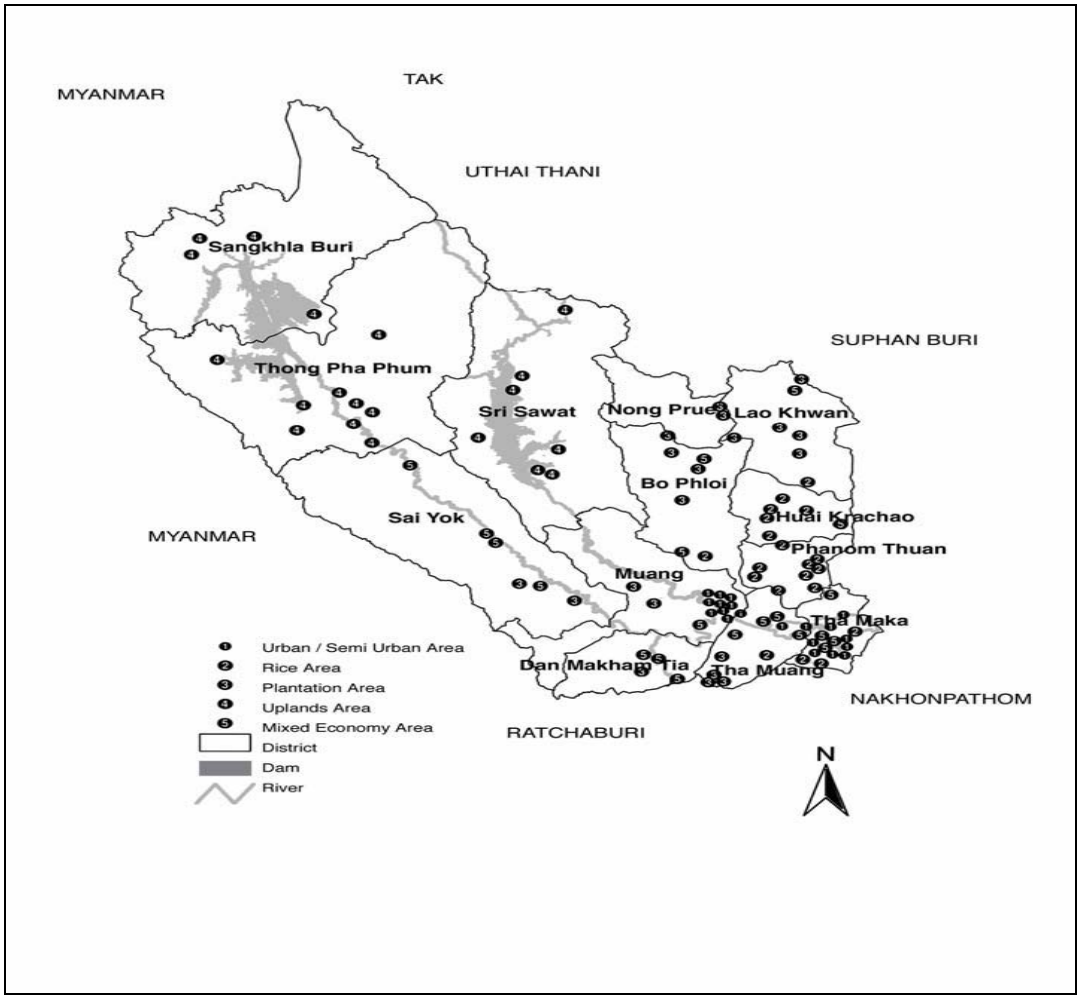


Figure A2 map of Kanchanaburi and distribution of five strata in the study area

APPENDIX B

QUESTIONS USED AS VARIABLES IN STUDY ANALYSIS

Kanchanaburi Project Round 5 (Year 2004) Institute for Population and Social Research, Mahidol University

Individual Questionnaire For
Respondents aged 15 and over

Household ID

District ___ ___
Sub-district ___ ___
Village ___ ___
Household No. ___ __
Individual No. ___ ___

The Institute for Population and Social Research, Mahidol University is collecting basic sociodemographic, economic and environmental data from 89 villages and 13 census blocks for the fifth year in Kanchanaburi. The data from the interview will be used to follow population changes in Kanchanaburi Province. The interview will take around 40 minutes.

Part 1: personal data

1.2 How old you are?

Age in years……years

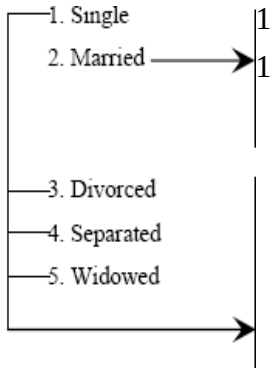
1.5 Sex of respondent

1. Male 2. Female

1.6 What is your nationality?

1. Thai 4. Karen 7. Cambodian 10. Other(Specify)……...
2. Burmese 5. Chan 8. Vietnamese
3. Mon 6. Lao 9. Chinese

1.8 What is your marital status?



1.8.1 First marriage (specify) M/Y….or age.....years

1.8.2 In last marriage, did you register?

1. Yes 2. No.

Ask only person aged 15-49

1.8.3 Do you plan to marry?

1. Yes, at age……Years
2. No……
3. Not sure…….....
4. Not comfortable to answer

1.9 Are you studying?

2. No, I completed level…….in years……or at age……

1.10 Are you working?

1. Yes 2. No

Part 2: Migration

2.3 From 1st July 20003 till now, did you ever move to stay somewhere else for one month or more?

1. Yes 2. No

Part 3: fertility

3.2 At this moment, how many living children do you have? (include children who stay with you and stay elsewhere)

Total number…..…person male…….person female……person

3.7.2 At this moment do you use contraception methods?

1. Yes	2. No

Part 4: health status

4.1 do you have any chronic illness (since three month or more) (e.i. diabetes, hearth disease, allergies, back pain, dizziness, feel faint, weak, etc.)

1. Yes	**2. No**

From Household Questionnaire

Does your family own any of the following items? If so, how many of each? (Please read all items to respondents)

Item	Number (If none fill)
a. Colour T.V.	
b. VDO/VCD/DVD/Karaoke Player	
c. Sattellite disk	
d. Audio Equipment Stereo	
e. Mobile phone	
f. Telephone	
g. Computer	
h. Pump Water machine/Electricity machine/Springer	
i. Air conditioner	
j. Sewing machine	
k. Washing machine	
l. Microwave	
m. Refrigerator	
n. Boat (use motor)	
o. Bicycle	
p. Motorcycle	
q. Tuk tuk	
r. Local truck (use only in agriculture sector)	
s. Car	
t. Pick up/Van	
u. Bus/ coach	
w. Tractor/Harvest Tractor/Trashing machine/Ploughing machine	

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