

The State of Thailand's Population 2013

Motherhood in childhood facing the challenge of adolescent pregnancy

The State of Thailand's Population 2013

The report was produced by the United Nations Population Fund Thailand Country Office and the Office of the National Economic and Social Development Board.

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Foreword



Thailand's population structure has changed, making it an ageing society. There is a larger number of older people, coupled with a falling number of children and nationals of working age. Consequently, Thailand needs to accelerate the creation of quality of life and productiveness of its people, using stringent measures so as to support its growing elderly population. This can be accomplished by encouraging safe births, providing access to appropriate reproductive health, developing knowledge-management systems in terms of family study and promoting sexual behaviour that is appropriate and safe. However, adolescent pregnancy is still a big problem, leading to unsafe births that create many adverse effects, such as health problems for the mothers and the children, problems that arise from poverty, loss of educational and development opportunities as well as social problems caused by unsafe abortions and child abandonment.

Taking into account both short- and long-term effects of the problem and its rising trend, the government has decided to make this issue a top priority. It aims to resolve the issue by emphasising access to opportunities and fundamental rights, education, vocational training, health care, age-appropriate development and by setting guidelines for adolescents/youth (15 to 21 years of age) to protect them from unwanted pregnancies in accordance with the framework for life-cycle development and the nation's strategic plan. OSCC 1300 (One Stop Crisis Centre), which provides information and a link with all involved agencies, was created to give victims access to services and their fundamental rights, so they can return to their daily lives with dignity.

The Office of the National Economic and Social Development Board hopes that the 2013 State of Thailand's Population Report on adolescent pregnancy, which tracks the trend of the problem, society's attitude towards it, causes and factors leading to the problem and its effects, in addition to important lessons for Thailand and other nations, plus suggestions for short- and long-term policies, provides guidelines on dealing with adolescent strategies and can be implemented in order to achieve genuine solutions in the future.

Mr. Arkhom Termpittayapaisith

Secretary-General of the National Economic and Social Development Board

Foreword



Every pregnancy should be a moment for celebration, and this is as true in Thailand as it is anywhere else in the world. Unfortunately, this is not always the case. Worldwide, millions of pregnancies are unplanned and undesired, and never is this news sadder than when it happens to young women and girls. The consequences are often tragic - abortion, single motherhood, girls not finishing school and being doomed to remain in low-paid jobs, as well as children growing up without fathers. These are issues that should not exist today to the extent they do, especially since the causes are largely understood.

More often than not, the society points fingers of blame at the girl who gets pregnant. However, the sad reality is that the factors and forces leading to adolescent pregnancy – and hence the responsibility to help prevent it – lie with a range of actors. Besides the girl, this responsibility lies with her parents, her peers, teachers and members of her community, and beyond them, it lies with those who at the national level shape the laws and regulations that might impede her access to the best possible means of protecting herself from getting pregnant. In many ways, adolescent pregnancy is the result of a lack of choices available to the girl: the lack of the choice to stand up to pressure from a boy due to gender norms, the lack of choice to obtain and carry contraceptives because her parents, health care providers or shopkeepers frown at this as shameful instead of praising it as responsible behaviour.

Each year, close to 125,000 young Thai women under the age of 19 give birth. However, it is estimated that this represents only half of the total number of pregnancies in this age group, as an additional 125,000 pregnancies or more are likely to end in abortion each year. This represents more than 10 percent of all adolescent girls in the country. Sadly, in a country where 80 percent of married couples use contraception, the number of adolescent pregnancies has been rising in recent years

This 2013 State of Thailand's Population Report is being presented as a companion to the 2013 State of World Population Report in a move to illustrate the adolescent pregnancy situation in Thailand. While the rise of adolescent pregnancy in many developing countries is to a large extent caused by poverty, in Thailand it stems from prevalent social norms which have not kept pace with rapidly changing adolescent lifestyles, especially sexual behaviour.

Everyone, at all ages and social strata, has basic rights - the right to education, to health and to live a life free of coercion and violence. Unfortunately, the violation of such rights is often both the cause and consequence of adolescent pregnancy. For instance, when a girl is not given the best possible sex education, she may end up getting pregnant, which in turn may mean she will not finish her schooling. Similarly, when she does not have access to contraception, she may end up pregnant, which may mean she will have an unsafe abortion with disastrous consequences for her health. When a girl allows herself to be forced or pressured into sex due to gender norms, she may end up getting pregnant, which would likely mean her becoming economically dependent on the man and hence continuing to submit to coercion and pressure.

This report seeks to paint a picture of adolescent pregnancy in Thailand and separate facts from fiction. It lays out the drivers behind the epidemic - the complex interplay between individual behaviour, changing cultural norms and economic factors that conspire to give young women and girls fewer choices than they should have. This report also seeks to chart ways to reverse this trend - by engaging men and boys to respect girls' autonomy, by providing young women with better sex education and access to reproductive health services and by empowering them economically and socially.

The State of Thailand's Population Report aims to capture the lives and stories of these young women, of their parents, friends and other members of their community in order to illustrate how, together, they make up the forces that, by act or omission, "conspire" against the capacity of girls to make informed decisions about their sexual life. The content of this report is derived from interviews, research and a review of available data and legal information. Discrepancies and challenges in the process of data collection remain, pointing to the need for more investment of time and energy. UNFPA hopes this report will bring us one step closer to ensuring that all girls and women in Thailand are able to make free and informed decisions about their sexual and reproductive lives.

Caspar Peek

Representative for Thailand **UNFPA**

Chapter 1

Access to basic rights – the foundation for preventing adolescent pregnancy

In Thailand, an average of 355 women under the age of 20 give birth every day, 10 of whom are less than 15 years old1. In reality, the number of pregnant adolescents is larger, but there are no figures on how many such pregnancies end in abortion.

Even though Thailand's economy has grown rapidly in the last decade, and women have gained more educational and vocational opportunities, the number of pregnant women aged 15-19 has increased. These young women are burdened with pregnancy at a time when they should be in school building their desired futures.

Adolescent pregnancy undermines a girl's ability to exercise her rights to education, health and autonomy. The problem is, in part, caused by rapid economic and social change that has seen urban society grow and the middle class expand rapidly.

This has brought a proliferation of choices and developing technology, but left many teenagers without sufficient age-appropriate knowledge to cope with the massive flow of information.

Adolescent pregnancy has many causes, including a lack of comprehensive sex education, negative attitudes towards premarital sex that refuse to acknowledge the reality of adolescent behaviour, parents not advising their children about sex, traditional beliefs that adolescent girls should get married and raise a family instead of completing their education, young people engaging in sex without understanding the consequences, teenagers' lack of knowledge or access to reproductive health services, as well as authorities' lack of awareness about their need for knowledge, services and social support.

Hence, many factors - family, education, social context, tradition and environmental conditions - all contribute to the large number of pregnant Thai adolescents. Sadly, most research confirms that teenagers are not ready for pregnancy and motherhood. Thus, adolescent pregnancy is often undesirable regardless of whether it is planned or not.

A change of role from young woman to "adolescent mother" means opportunities are lost for the teenager, her family and society. It is difficult to assess the extent of the short- and long-term impact of adolescent pregnancy on livelihood, quality of life, health, society and the economy. Some adolescent mothers end up separated from their partner and left to face problems alone, which can lead to emotional insecurity, stress and depression. Many young women have to conceal their pregnancy from parents and people around them. Adolescents are also at higher risk of death and illness during pregnancy and childbirth. Adolescent pregnancy has consequences for the health of the infant, such as increased chance of low birth weight, preterm birth and infant mortality. Children born of unwanted pregnancies are also sometimes abandoned at hospitals.

Meanwhile, a number of pregnant teenagers drop out of school, while some quit their job and are left with no income. As a result, they become "children raising children".

The results of international studies show that inequality and a lack of rights protection for young women are significant obstacles to solving the problem of adolescent pregnancy. More specifically, young girls often lack educational opportunities, have little or no education,

¹ Public Health Statistic 2012, Bureau of Reproductive Health, Department of Health 2013

"children raising children"



A Thai woman has on average 1.6 children



16%

16 percent of present births are to adolescent mothers

are unable to access education on sex and relationships, do not have the skills to delay sexual activity or develop a relationship, do not receive information or access to contraception, and can fall victim to sexual abuse.

Having a large number of pregnant adolescents places a burden on the overall resources of a country.

Low birth rate and challenges for the Thai population

Thailand has progressed and its people enjoy rising incomes, but the country is now stuck in the so-called middle-income trap. Thailand is now transitioning into an ageing society as a result of a rapid decline in the birth rate and people living longer. Some 40 years ago, a Thai woman had, on average, 5 to 6 children, but that has now fallen to 1-2. Also, more women now get married at a later age, and more choose to stay single. The total fertility rate (the average number of children born to a woman of reproductive age) has dropped to just 1.62 (Office of the National Economic and Social Development Board, 2013.)² This is likely to drop further to the level of Asian countries with especially low birth rates such as Japan, South Korea and Singapore.

The problems of low birth rate and the income trap are turning Thailand into a "getting old before getting rich" society. But that is only one part of the worry. The more pressing concern is that while Thailand's birth rate continues to fall, adolescent pregnancy is on the rise. Teenagers are the population sector most in need of education, because their behaviour will reflect the trend of Thai human resources in the future.

Current demographic trends threaten to impact the nation's competitiveness and lead to a greater fiscal burden through social security costs.

The responsibility of looking after the entire population will fall on a smaller working-age population in the future. Thus, Thailand needs to increase the working efficiency of its new generation to be able to handle the increasing burden brought by an ageing population. The "dependency ratio" – the number of children and the elderly per 100 working-age people – is changing rapidly. Data from the Office of the National Economic and Social Development Board reveals that in 2010, for every 100 individuals of working age there were 30 children and 20 elderly persons. But by 2040, the dependency ratio will be 100 working-age people having to take care of 60 elderly persons and 20 children.

The concern is that 16 percent of present births are to adolescent mothers,³ and that trend is increasing. The question is whether these teenage mothers and their children will have the opportunity to become productive members of society at a level demanded by the future Thai economy.

Burden of working population

2010 30 100 20 2040 20 100 60

² Total Fertility Rate is a universal indicator that shows the average number of children of reproductive age women, regardless of marital status, during reproductive years (15-49 years old).

³ Percentage of all births in 2012, the dividend is 129,451 child births by 15-19 years old women, and the divisor is the total number of child births by women of all ages which is 801,737



Estimated number of population 2010-2040

ratio:1,000

	2010	2015	2020	2025	2030	2035	2040
Nationwide	63,789	65,104	65,996	66,371	66,174	65,350	63,864
In urban areas	27,705	30,973	34,131	37,073	39,705	39,210	38,318
Outside urban areas	36,084	34,131	31,865	29,297	26,470	26,104	25,546

Source: Office of the National Economic and Social Development Board Note: This data does not include the 2.1 million foreigners residing in Thailand.

Teen pregnancy – the denial of human rights

Thailand has enjoyed continual social and economic progress. But despite some efforts to distribute income more fairly, there are still large wealth gaps in Thai society. The oft-heard local expression "The rich live in clusters, the poor all over", reflects this inequality. While national development measures aim to improve Thai citizens' quality of life, understanding population changes will help us predict the future – the social trends, risks and problems people will have to face – and create public policies that help ensure more equal access to resources, opportunities and basic rights for all.

In essence, adolescent pregnancy is a reflection of social disparity and the denial of basic rights. Some adolescents never receive age-appropriate sex education. Their right to such education and self-improvement is denied. Those who fall pregnant because of sexual abuse are being denied their right to protection. Those who ask for the means to avoid becoming pregnant and are turned away at clinics are being denied the right to health. Those who are expelled from school or shamed into not attending are being denied the right to education, and to a life of professional development and happiness.

The framework on several human-rights conventions specifies the obligations of states in protecting the rights of their people. The Convention on the Rights of the Child (CRC) - ratified by Thailand in 1992 - specifies that states must protect children's rights such as:

- The right to life receiving basic health care, peace, and security;
- The right to development having a supportive family, receiving good education, and having proper nutrition;
- The right to protection from harm, neglect, being sold, child labour and exploitation;

• The right to participation – to state opinions, express, be heard, and participate in matters that affect them.

This framework also extends to the human rights of pregnant adolescents.



Adolescent pregnancy and human-rights principles

An individual's rights include:

- The right to liberty and security
- The right to privacy
- The right to make one's own decisions
- The right to consent to marriage and have equality in the marriage
- The right to health, including sexual and reproductive health
- The right to equality and non-discrimination based on age
- The right to not be subjected to torture or other cruel, inhumane or degrading treatment or punishment
- The right to be free from gender-based violence
- The right to education, including access to sex education
- The right to participate in the conduct of public affairs
- The right to receive information
- The right to freedom of expression

The above appears in the convention on treaties, including the Convention on the Rights of the Child (CRC) and the International Conference on Population and Development (ICPD).

Source: UNFPA, 2013 State of World Population. Motherhood in Childhood: Facing the Challenges of Adolescent Pregnancy



Right to education

The number of students at every educational level is falling as a result of Thailand's low birth rate. This is a negative development with potentially serious consequences for Thai society and its economy. This development is compounded by the rising dropout rate seen in recent years.

Many factors contribute to student-dropout rates, including poverty. Although there are no precise figures for the number of young girls who quit school because of pregnancy, pregnant students usually do drop out or move to another school. This is because pregnancy and sexual activity among teenagers is not accepted in Thai society. If a teenager does become pregnant, she and her parents are likely to feel shame and humiliation. Meanwhile, fearing damage to its reputation, the school will pressure her to drop out.

Only 35 percent of Thailand's 31,159 schools reached national standards in the last evaluation of basic educational quality. Due to the differing quality in education, many students from upcountry have to migrate to big cities for schooling. As a result, many have to stay in dormitories away from parental care, which can lead to sexual activity and pregnancy.

The Percentage of Dropout Students by Educational Level in Academic year 2007 - 2011

	Academic Year 2007 Academ			nic Year 2008 Academic Year 2009			09	Academic Year 2010			Academic Year 2011				
Educational level	Students at the Start of Year	Students who Dropped Out	%	Students at the Start of Year	Students who Dropped Out	%	Students at the Start of Year	Students who Dropped Out	%	Students at the Start of Year	Students who Dropped Out	%	Students at the Start of Year	Students who Dropped Out	%
Primary Education	4,004,326	45,374	1.13	3,823,056	37,529	0.98	3,651,613	8,472	0.23	3,525,976	6,786	0.19	3,461,367	3,657	0.11
Lower Secondary Education	2,265,371	55,079	2.43	2,175,040	53,147	2.44	2,172,287	28,525	1.31	2,143,430	20,155	0.94	2,036,863	15,340	0.75
Upper Secondary Education	1,002,835	21,677	1.68	984,093	18,746	1.90	1,026,281	10,812	1.05	1,057,389	10,886	0.56	1,099,613	8,933	0.81
Total	7,272,532	122,130	1.68	6,982,189	109,422	1.57	6,850,181	47,809	0.70	6,726,795	37,827	0.56	6,597,843	27,930	0.42

Source: The Bureau of Policy and Planning, Office of the Basic Education Commission, Information Technology Group (http://www. bopp-obec.info/home/?page_id=5993)

Right to reproductive health care services

The most important reproductive right is the right to make informed decisions. Along with parents and teachers, health personnel have a crucial role to play in ensuring that adolescents have the knowledge and means to make informed decisions about their sexual and reproductive rights. This means that counselling should be available, affordable and approachable for young people. Additionally, it means that young people must have access to contraceptives, whether condoms, the pill or (semi-) permanent methods best suited to their needs and circumstances.

Despite the universal health care system, access to semi-permanent contraceptives such as intrauterine devices (IUDs) and implants has decreased. Specifically, the number of adolescent girls who use semi-permanent contraceptive is very small: the percentage of teenagers aged 15-19 who use IUDs or implants has dropped to 0.1 and 0.2 percent respectively.

This means that only 3,200 out of 1.1 million 15- to 19-year-olds who are married or sexually active are using implants or IUDs. Though these methods are relatively expensive, for adolescents they are far more effective than condoms or the pill.

Challenges remain in making contraceptive services responsive to the needs of adolescents via youth-friendly service and in promoting teenagers' access to comprehensive reproductive health services.

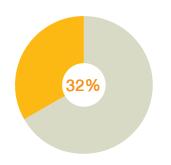
The 2013 Study of Family Planning Management System in Thailand by the Department of Health, supported by the United Nations Population Fund, found that the procurement of contraceptives varies according to official policies at provincial and health-facility levels, and the type of contraceptive services provided by each facility. Most government health facilities are still providing temporary contraception such as contraceptive pills and injection. As for the more expensive contraceptives such as IUDs and implants, there are only a small number of facilities that provide these types of birth control. World Health Organisation data suggests that semipermanent contraceptives are suitable for preventing pregnancy in teenagers because they can last 3-5 years. However, only 0.3 percent of sexually active Thai teenagers are using vaginal rings or implants as birth control.

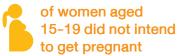
Thailand's 2011 Abortion Surveillance Report by the Department of Health found that the percentage of pregnant patients admitted for terminations after not using any contraceptive was as high as 56.2 percent, while 43.8 percent were using some form of contraception. One-third of those who had an abortion were teenagers.



1.1 million

15- to 19-year-olds, who are married or sexually active, are using implants or IUDs





Adolescent pregnancy can also be the result of sexual abuse. Young women who are coerced, forced or did not intend to have sex, have no chance to use contraceptives. Some choose to take the "morning-after" pill to prevent pregnancy, while others undergo an abortion later. If a pregnant adolescent does decide to give birth, there is still a need for youth-friendly natal services.

During pregnancy and childbirth, adolescents need special services, including antenatal care, because they are at greater risk of suffering miscarriages and abortions. Adolescent pregnancy also leads to other health problems as a consequence of missing antenatal care appointments or avoiding visiting local health services in a bid to conceal the pregnancy from parents and the community. Without proper antenatal care, complications such as haemorrhaging and infection occur more easily, which may result in higher maternal mortality rates.

Legal foundation: Why Thailand is pushing for the reproductive health protection act

The issue of adolescent mothers raises the question of how much importance Thai society gives to reproductive rights.

Several countries have laws that address access to public health services and education, responsible parenthood, provision of reproductive health services for adolescents, provision of family planning services, etc. Without a legal foundation for sexual and reproductive health rights, access to service might be compromised which could significantly affect national development in the future.

"Currently, we have many social problems involving sexual health. For example, adolescent pregnancy stems from our deep-rooted social problem of not giving children sex education. Adolescent pregnancy is an important problem because it affects both the mother and the children. The infants are likely to be weak, have low birth weight, preterm birth, or be miscarried, all of which affects the health of the adolescent mothers. This bill would prevent and alleviate this problem significantly."

Pensri Bhijaisanit, M.D.

Chairman of the Working Group on the Drafting of the Production and Promotion of Reproductive Rights and Sexual Health Bill

Consultation forum on the draft bill in Bangkok on September 26, 2013

"Some people want to delay their pregnancy by another 3-5 years. This group should be given implants or IUDs but these contraceptives are not available. They end up having to take contraceptive pills or injections, which have a higher failure rate. Therefore, this [bill] is important.

Kittipong Saejeng, M.D.

Director of the Bureau of Reproductive Health

News programme, MCOT Thai News Agency on September 28, 2013

"Most of the audience view this bill as necessary. Some people shared their opinions on subjects such as whether or not a pregnant girl should be allowed to continue her education.

Nattaya Boonpakdee Women's Health Advocacy Foundation Manager Public hearing forum in Khon Kaen on August 6, 2013

Summary

Thailand's development success in the past decades means it is able to declare that it has met targets on Millennium Development Goals (MDGs). On maternal health, however, the picture is worrying, as the adolescent birth rate continues to rise. A large number of Thais terminate pregnancies because they are unplanned, and many of these are likely to be teenagers.

The United Nations Population Fund, within the framework of the ICPD Programme of Action, has placed importance on protecting and fulfilling human rights to protect sexual and reproductive health, especially for teenage girls, by considering:

- Reducing pregnancy risks by considering the needs of teenage girls, especially sexually active teenagers and neglected teenagers;
- Enhancing the capacity and strengthening the participation of civil society, communities and teenagers;
- Empowering teenage girls to continue their education and gain the opportunity for self-development towards a better quality of life;
- Advocating new ideas that concern human rights protection in order to effect a change in perspectives, attitudes, thinking processes and habits, as well as valuing and defining the structure, policies and the actions towards the protection and care of pregnant teenagers. It is important not to blame the adolescents for the problem, and to realise that all adults involved have a responsibility to protect children's rights and basic needs so as to lower the risks of teenage pregnancy.





Chapter 2

Trends and patterns of adolescent pregnancy/childbirth

The data for comparing adolescent pregnancy in Thailand with the issue in other countries is limited, because few countries have data on the number of pregnanciesthey only record births. For this reason, the Adolescent Birth Rate - the number of pregnancies among teenagers aged 15-19 for every 1,000 teenagers⁴ in the same age group – is often used as a key indicator in moves to reduce adolescent pregnancy.

The Convention on the Rights of the Child considers a person under 18 years of age to be a "child". This report uses national and provincial data on birth rates for females aged 15 to 19, 10 to 18, and 10 to 14.

The magnitude and trend of adolescent pregnancy

While the overall birth rate in Thailand is decreasing, pregnancy among women under the age of 20 is rising. According to public health statistics compiled by the Department of Health, there were a total 801,737 births in 2012. Of that number, 129,451 mothers were teenagers aged 15-19, out of a total 2.4 million teens in the same age group. The ratio of adolescents giving birth is 53.8 per 1,000 girls the same age. In 2000, this ratio was only 31.1 to 1,000, which means there has been an alarming increase in adolescent pregnancies.

The Department of Health, under the Ministry of Public Health, has set a 5-year goal to cut the adolescent birth ratio to 50 per 1,000. In order to cut the adolescent pregnancy rate quickly to what would be an acceptable level for a country with the socio-economic development indicators of Thailand, a significant acceleration of this effort would be required.

The increasing number of adolescent pregnancies spurs valid concerns about the quality of life of the children who result, and who, as adults, will become a driving force for the country's development. The key reason for the concerns is that many adolescents are not ready to step into motherhood to raise and support their children. Over the past 12 years, the number of females aged between 10 and 19 has dropped by 966,000, which means that there are 80,000 fewer females is this age group every year. It has decreased from 5.46 million in 2000 to 4.5 million in 2012. In 2012, the Office of the National Economic and Social Development Board estimated that, if the low birth-rate trend persists, the number of births in Thailand would drop to 500,000 per year by 2045. While the number of births is set to fall, the ratio of childbirth among adolescents is rising. A higher number of children born to adolescents coupled with a decline in overall birth rate could impact Thailand's economic, social and health development.

The rate of pregnancies among teenagers aged 15-19 in Thailand is alarmingly higher than in neighbouring countries. Japan, South Korea, China and Singapore only have 2-6 cases per 1,000, while the adolescent birth rate in Thailand is still in the same league as countries such as Indonesia, the Philippines, Cambodia,

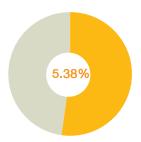


No. of newborns in Thailand will drop from 800,000 in 2012 to 500,000 in 2045

⁴ Teen birth rate was obtained from total births of women aged 15-19 divided by the total number of women aged 15-19 and multiply by 1,000 to achieve the birth ratio of women aged 15-19 per 1,000 individuals of the population of the same age.



Ratio of adolescents giving birth

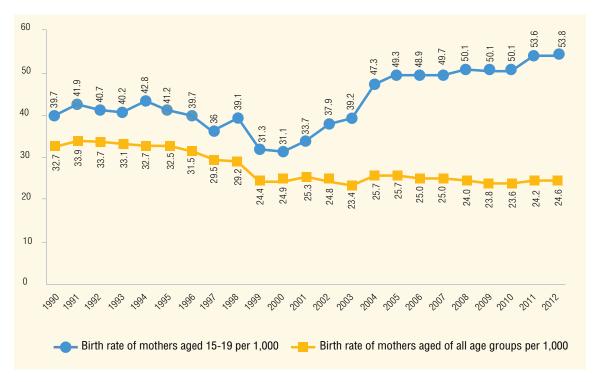


Timor-Leste and Latin American nations such as Chile, Costa Rica and Cuba. The rate in Thailand is well above the Asia-Pacific region's average of 35 to 1,000 (UNFPA State of World Population 2013).5

"Behaviour such as unsafe sex and early sex leads to HIV/AIDS infection and other sexually transmitted diseases. As for teen pregnancy, we don't have the data on pregnancies. We only have the data on childbirths, which is quite high. The latest data, in 2012, revealed that the adolescent birth ratio is 53.8 teenagers aged 15-19 years old per 1,000. The number continues to grow."

> Kittipong Saejeng, M.D. Director of the Bureau of Reproductive Health, Ministry of Public Health

Birth rate of mothers aged 15-19 and mothers of all age groups from 1990 to 2012



⁵ Refers to statistics on adolescent birth rate in women aged 15-19. The data was compiled from 2005 to 2010 by the United Nations Population Division. It may not be in accordance with the database of each country. The comparison of international data on adolescent birth rate reported via various information sources are different on many factors such as the completeness of the data, the year it was compiled and the source. Thus, the abovementioned comparisons are proxy indicators only.

Statistics for 2012 reveal that 15,440 adolescents aged 15-19 had repeat pregnancies, or 11.9 percent of births among 129,451 women under 20 years of age were repeat births. Alarmingly, 880 adolescent mothers gave birth for a third time. In addition, there were 3,725 girls pregnant before reaching the age of 15, 243 of whom gave birth for a second time (see appendix, Tables 1-4).

Teen mothers aged 15-19



had repeat pregnancies

Statistics on the pregnancies among girls aged 15-19 years from a total of 2.4 million

Every day, up to 10 adolescent women aged 15 or under give birth and 0.6 of them have already had one child.

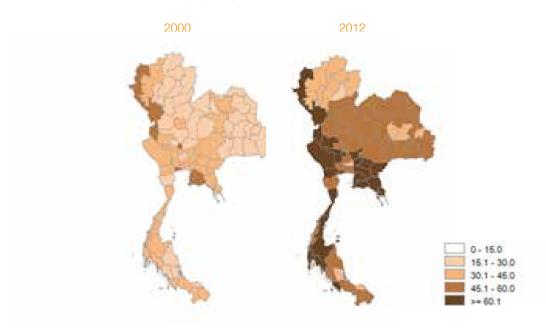
Every day, 355 mothers aged 20 or under give birth. Of them, 1 out of 3 became pregnant unintentionally, 42 became pregnant for a second time and 2.4 were having their third child.

22.1 percent of women aged 15-19 or more than 530,000 women are married or living with their partner.

Source: 2012 Public Health Statistic, 2009 National Reproductive Health Survey, 2002 Kritaya Archavanitkul et al, Survey of Children's Condition in Thailand (Multiple Indicator Cluster Survey Round 4 2013) by percentage of 20-24-year-old women who were married before turning 18.

At the provincial level, the highest adolescent birth ratio was recorded in Chon Buri, Rayong, Samut Sakhon and Prachuap Khiri Khan, at 79-85 per 1,000 adolescents. Six provinces had a ratio of adolescent pregnancies of less than 40:1,000, namely Pattani, Phayao, Nan, Lampang, Lamphun and Phrae.

The ratio of births among mothers aged 15-19 per 1,000 women in the same age group in 2000 and 2012



Source: The Bureau of Policy and Strategy, Minstry of Public Health - in reference to Table 1 - Birth rate ratio among teenagers aged 15-19 per 1,000 in the same age group in the years 2000 and 2012

Births to adolescent mothers double in 19 provinces In 2013, the Bureau of Reproductive Health, Department of Health, probed into why some provinces had a higher ratio of adolescent pregnancies. For instance, it was noted that Nakhon Nayok had the highest ratio in the country, even though there were no particular indicative factors present. Upon further study, it was found that many adolescents who gave birth in the province came from neighbouring provinces such as Pathum Thani and Chachoengsao. This is because Nakhon Nayok has a good transportation system, making it easier for mothers to travel to hospital. Some adolescent mothers also chose to register their newborns in other provinces for the sake of anonymity. Hence, Nakhon Nayok ended up with a higher adolescent birth ratio.

Plainly, birth statistics from hospitals and birth certificates do not necessarily reflect the actual number of local residents giving birth. Since adolescent pregnancy is still not accepted by society, some young women might choose to give birth in other provinces to conceal their pregnancy.

Between 2000 and 2012, the birth-rate ratio among adolescents rose rapidly. The adolescent birth rate doubled in 19 provinces, namely Chai Nat (from 20 to 56 per 1,000), Loei, Prachuap Khiri Khan, Sukhothai, Nong Bua Lam Phu, Uttaradit, Phetchabun, Chaiyaphum, Ayutthaya, Roi Et, Phatthalung, Buri Ram, Phetchaburi, Saraburi, Phang Nga, Nakhon Sawan, Samut Songkhram, Mukdahan, and Samut Prakan. (Listed in descending order; see Table 1 in appendix.)



The proportion of adolescents giving birth varies according to economic, social and behavioural conditions. Their access to education and reproductive health services also has a role to play, despite the National Health Security Policy's aim to offer an equal level of medical care to one and all. Other discrepancies between areas encompass birth-control methods, early marriage, local tradition and beliefs, social pressure, strengths of local service providers, as well as the enforcement of laws and policies.

Married adolescent

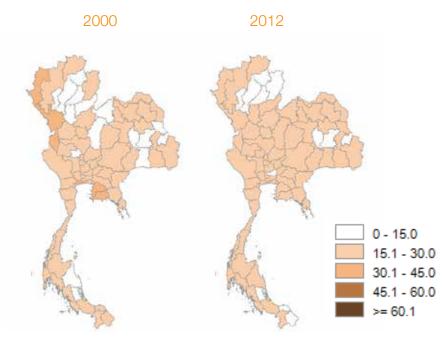
The 2013 State of World Population Report defines child marriage as marriage in which one or both partners are under the age of 18. This applies to both boys and girls, but the practice overwhelmingly involves young girls. Child brides have difficulty exercising their autonomy, whether in terms of negotiating safer sex, timing or spacing their pregnancies, or getting access to sexual and reproductive information and services. In addition, their bodies are often not physiologically ready for childbearing.

Though the statistics used by agencies refer to the ratio of teenagers aged 15-19 who give birth, Thai law does allow 17-year-olds to wed. This factor creates problems for data interpretation, as is not clear how many adolescents aged 15-19 who give birth are married. Additionally, many couples may be living together, and many of them might want children.

In 2012, 133,176 girls aged 10-19 gave birth, of whom only 81,396 were aged 10-17. In other words, 39 percent of mothers in this age group were aged 18-19 - or at the age of consent according to law. Chon Buri, Prachuap Khiri Khan,

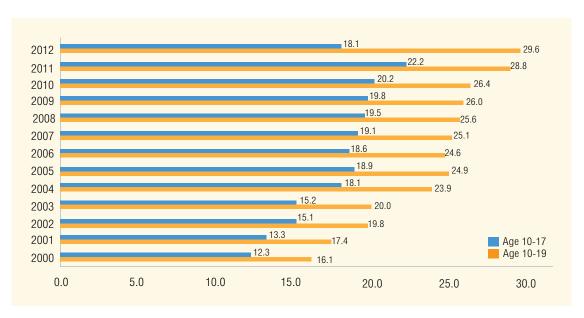
Samut Sakhon and Rayong still had the highest number of births among women aged 10-17, at 26 out of every 1,000 (see Table 2 in appendix).

Birth rate among girls aged 10-17 per 1,000



Source: The Bureau of Policy and Strategy, Ministry of Public Health - in reference to Table 1, the ratio of births among women aged 10-17 per 1,000 of the same age group in the years 2000 and 2012

Births among mothers aged 10-17 and 10-19 per 1,000 of the same age group in the years 2000 and 2012



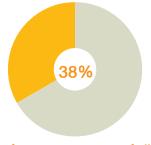
Source: The Bureau of Policy and Strategy, Ministry of Public Health – in reference to Table 1, the ratio of births among women aged 10-17 per 1,000 of the same age group in the years 2000 and 2012.



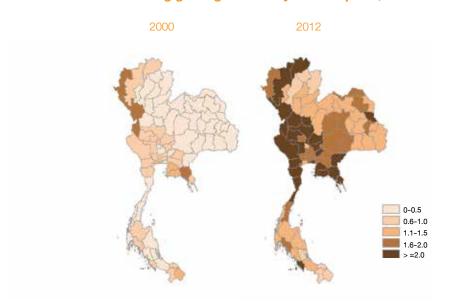
Births among girls under the age of 15

The number of birth to girls under the age of 15 has more than doubled in 12 years, from 1,465 in 2000 to 3,725 in 2012, while the ratio has tripled. The birth ratio among girls aged 10-14 was 1.78 per 1,000 in 2012, compared to 0.55 per 1,000 in the year 2000. Over the past 12 years, Prachuap Khiri Khan, Rayong, Phetchaburi, Kanchanaburi, Saraburi, Samut Prakan and Phichit have recorded the highest number of births to girls under the age of 15. These numbers are a cause for concern as Thai law stipulates 17 as the age of consent. In other words, all these cases, including the ones that may have ended in abortion, are technically cases of rape, regardless of the age of the male partner.

Birth rate among girls aged 10-14 years old per 1,000



of pregnant women of all ages forget to take birth control



Source: the Bureau of Policy and Strategy, Ministry of Public Health - in reference to Table 4 birth rate ratio among women aged 10-14 per 1,000 from the same age group in the years 2000 and 2012.

Repeat pregnancies and births among adolescents

In 2012, 11.7 percent of mothers aged 15-19, or 6.4 per 1,000, gave birth more than once or were pregnant for a second time before they reached the age of 20.

Repeat adolescent pregnancy implies a failure in reproductive health services, especially in terms of advising adolescent mothers to start using birth control immediately after giving birth. Therefore, it is important to provide information and postnatal care to ensure that both the mothers and their partners understand birth control and learn that they should delay the arrival of the second child by at least 2 years, preferably until they turn 20.

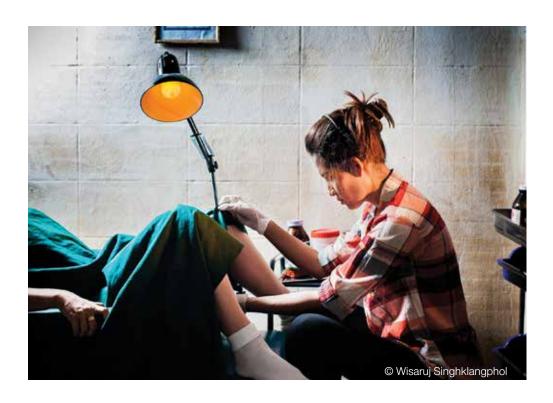
Another cause of adolescent pregnancy is sexual abuse. According to a survey on domestic violence and women's health, 5-9 percent of girls were found to have experienced some form of sexual violence at the age of 15 or younger. Some 25-50 percent of the perpetrators of sexual violence were found to be strangers, followed by people known to the victim and the victim's family (14-18 percent), relatives or people living in the same household (6-18 percent) and boyfriends (7-18 percent) (Kritaya Archavanitkul et al 2003).

"There was a case where an 18-year-old Karen girl went to study in Bangkok and was sexually abused. She got pregnant. Her mother brought her to hospital, both were crying. I saw that and felt sorry for them. Every month, we see at least a couple of cases like that. Most of them are teenagers who left home to study."

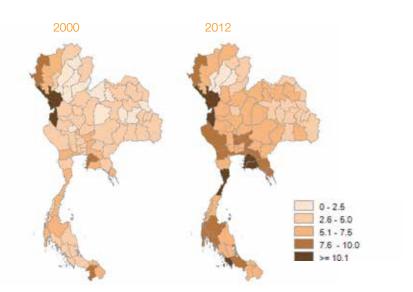
A nurse at Mae Sot General Hospital

"How can children take care of children? Since they are still children, it is impossible for them to raise a child properly, feed the baby, have it vaccinated and take care of the baby's mental health. There will be a new generation adding to the existing problems. More social problems will follow. We found that 25 percent of the adolescent mothers are pregnant again within 2 years because the system has not solved any of their problems. They give birth and then go back to face the same environment, the same risk factors, which leads to another pregnancy."

Prof. Suwanna Ruangkanchanaset, M.D., Vice President of Mahidol University



Repeat births among mothers aged 15-19



10,564 adolescents seek medical care associated with miscarriages or abortions

> Source: the Bureau of Policy and Strategy, Ministry of Public Health – in reference to Table 3 repeated birth-rate ratio among women aged 15-19 per 1,000 from the same age group in the years 2000 and 2012

Number of repeat births among women aged 10-19 in 2012

Age range (Years)	Total Births	Total Repeat-pregnancies	Repeat-Pregnancy percentage
<20	133,176	15,683	11.8
15-19	129,451	15,440	11.7
<15	3,725	243	6.5

Source: 1. 2012 Birth data from the Bureau of Policy and Strategy, Ministry of Public Health

2. The data was analysed by the Bureau of Reproductive Health, Department of Health

Pregnancy termination – the missing number

An estimated 200,000-300,000 pregnancies are terminated in Thailand every year, though there is no specific data to confirm the accuracy of this figure. In 2011, 10,564 females aged 15-19 were admitted to government medical facilities to be treated for complications arising from miscarriages or abortions. Prachuap Khiri Khan, Surat Thani, Krabi, Phitsanulok, Phang Nga, Nong Bua Lam Phu, Tak and Loei had the highest number of 15-19-year-olds treated for complications arising from miscarriage, at almost double the national average, or 7-8 per 1,000 (see Table 5).

According to international figures, abortions tend to be sought in a disproportionately high number by unmarried adolescents, poor women and those who have reached their desired family size. A conservative estimate would put the number of adolescents seeking abortion in Thailand at about the same number as those who delivered, or around 130,000.

"These adolescent pregnancy problems are only the tip of the iceberg. We don't know about the problems underneath. It's a group that we have no access to. We don't know how large a group it is. Abortion is one group, and then there are some abortions that are not registered in the system. Also, some girls give birth in private hospitals. So, the data we have from within the system is only the tip of the iceberg."

Noppadol Athiratpanya, M.D., Director of Banlad Hospital

Mothers aged 15-19 are married or have been married



Fathers often out of the picture

The information often missing in adolescent pregnancy cases concerns the father. Who is he and what role does he play in raising the child? Though this information is necessary for policymakers and other involved parties seeking to prevent adolescent pregnancies and to alleviate their consequences, there is very little information collected about the male partner.

Data from the 2010 National Population and Housing Census shows that only 13.3 percent of mothers aged 15-19 are married or have been married. Yet, there is very little information about their partners and how many of them are older. Also, there is a scarcity of data on how many of them support the mother and child, how many school-age girls are living with men for social, economic and cultural reasons, and how many girls are abandoned once they become pregnant.

"We really want to meet adolescent mums and dads, but they are often absent due to work or school. For instance, it is parents who should be bringing their child in for vaccinations, not the grandmother. If the parents show up, we can ask them about their child, their school, if they plan to return to school or work, as well as follow up on birth control. Also, we can give them guidelines on certain life skills like learning to say no and making the right decision. We are concerned about these factors whether they have given birth or terminated their pregnancy. We also urge the adolescent fathers to come forward so we can talk to them about the role of being a father, and try to make them feel positive about caring for their child. Our data indicates that 40 percent of teenage parents break up after the pregnancy, and only 60 percent of the fathers get involved. Nevertheless, we don't have data on the length of their involvement because we have consistently learned that fathers only show up for a short while before disappearing. "



Jiraporn Prasertwit, M.D. Teen Clinic, Ramathibodi Hospital

Summary

The birth rate among mothers aged 15-19 and those under 15 has doubled in the last 12 years. Only 39 percent of births from adolescent mothers aged 15-19 births contributed to women aged above 17 years old, the legal age of marriage in Thailand. In addition, as many as 11.9 percent of adolescent births were a result of repeat pregnancy after first delivery. The fact that women under 20 years of age have experienced multiple pregnancies reflected the limitation of their access to services, information and education, and semi-permanent birth control that could help delay their pregnancies.

There are many challenges in obtaining data for adolescent pregnancy. First, the law covering abortion makes it difficult to collect reliable information, as available data only covers the number of births to adolescents. Second, the data used to formulate statistics and trends for adolescent birth are obtained from different sources, with discrepancies between them. Third, Thailand still lacks a single, integrated database that can be shared by state offices and actors at the national and sub-national levels. This prevents policymakers and planners from putting in place measures needed to drastically and quickly cut the rising number of adolescent pregnancies.



Chapter 3

Factors leading to adolescent pregnancy



Several factors contribute to adolescent pregnancy, including a culture in which women are expected to marry at a young age, poverty, lack of education, the effect of alcohol and drugs on sexual behaviour, a lack of information on reproductive health, lack of knowledge and access to contraception, incorrect use of contraceptives, pressure from peers who have had sex, and sexual abuse or coercion. These factors are interrelated: societies where women have fewer educational opportunities; poverty which forces teenage girls to drop out of school or to depend on others for educational expenses; a lack of knowledge and skills to protect themselves from sexual abuse; finding themselves in a situation where they do not expect to have sex and hence have not taken precautions or choosing not to use condoms.

However, past action taken to resolve this problem usually focused on a narrow perspective, placing the blame on the girl's behaviour. Implicit in such interventions is the belief that the girl is responsible for preventing pregnancy, and an assumption that she is the one at fault if she becomes pregnant. Such approaches and thinking are misguided because they fail to take into account systematic solutions based on wider contributing factors – economic, social, legal and other factors in the environment – in which the causes of adolescent pregnancy are rooted.

A 2011 report from the Thai Senate Standing Committee on Public Health indicates that one of the key factors leading to adolescent pregnancy is that relatively few children are given comprehensive sexuality education as it not yet taught in all schools.

Social and economic changes are also factors stimulating or inducing school-age children to have sex. These include late-night entertainment, media and living together in dorms that fail to provide security of residents. Also, teenagers do not always recognise the importance of contraception and lack the skills to say no to sex or to negotiate safe sex. Laws to protect adolescents' rights are not rigorously enforced, as evidenced by the number of students dropping out from school before they complete their compulsory

period of education. At the same time, Thailand has no law on reproductive health which would guarantee access to appropriate health services.

The path to adolescent pregnancy

A research report by Siriporn Jirawatkul compiles data from interviews to shed light on the patterns that lead to adolescent pregnancy:

According to the findings, the reason the subjects did not use protection while having sex were: they had not carried any, they had limited time, they did not think they would end up having sex, they did not think they would get pregnant because the previous times had been fine, they thought that just one time would not hurt, wearing a condom would take away the fun, they were forced, could not say no, etc.

Education of teenage girls

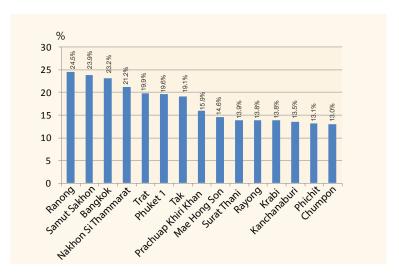
Education is an important factor in adolescent pregnancy rates. Girls who are not in school have a higher chance of becoming adolescent mothers than their peers who are still in school. Many teenage girls who marry before they turn 18 are found to have left school earlier.

Encouraging students to stay in school at least until they complete their compulsory education is one of the best ways to prevent adolescent pregnancy.

Government policy stipulates 9 years of compulsory education for all Thai children, but a large number of students drop out of school every year. The retention rate for students at secondary- and high-school levels is a cause for concern.

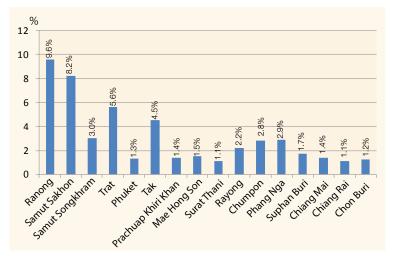
Level	Academic Year	Retention Rate (%)
1st grade	1997	100
6th grade (completing primary school)	1995	85.9
	2000	87.1
	2002	88.4
	2005	90.4
9th grade (completing secondary school)	2004	74.6
	2005	74.4
12th grade (completing high school)	2002	42.3
	2007	51.1
	2008	52.8

Source: Information Technology Centre, Office of the Permanent Secretary of the Ministry of Education Based on the National Population and Housing Census in 2010 (see Table 6 in appendix), 317,253 girls aged 12-17 - (compulsory education age) or 10.8 percent of 2.93 million girls in the same age group nationwide, are not in school. Of this figure, 13.5 percent of the dropouts are in the South, while the Northeast has the lowest number of female dropouts, at 6.5 percent. In the following 15 provinces, over 13 percent of girls aged 12-17 are not in school:



It is no coincidence that the provinces that score low for schoolgirl attendance are also the ones with the highest adolescent pregnancy rates, such as Prachuap Khiri Khan, Rayong and Samut Sakhon.

Some 16,117 girls aged 12-17 have **no education**, or 0.5 percent of the total 2.93 million girls in this age group. There are 17 provinces in which the percentage of girls aged 12-17 that have no education is over 1 percent, namely:



Some 6.7 percent of girls aged 12-17 found to have had no education in the country hail from Ranong, Samut Sakhon, Trat and Tak.

Studies in Chiang Rai, Nan, Songkhla and Phetchabun found that teenagers who have not completed their schooling have a greater chance of getting pregnant than those with higher education (Somrat Sritakool 2007; Suradej Boonyawet et al 2008; Anong Prasartwanakij et al 2009).

A survey of 1,000 teenagers across Thailand conducted by the College of Population Studies, Chulalongkorn University, found that most teens blame lack of proper sex education for the rising number of adolescent pregnancies (Pangpond Rakamnuaykij et al 2013). A study on the link between educational level and birth control found that teenagers with higher education have a higher rate of condom usage than those with lower education (Haque and Soonthorndhada 2009). Even though national-level data shows there is a wide usage of contraceptives in this population group, research at the district level indicates that some pregnant adolescents have no knowledge of safe sex and contraception, while those who have the knowledge often lack the skills to persuade their partners to wear a condom. Some also



Some 6.7 percent of girls aged 12-17 found to have had no education in the country hail from Ranong, Samut Sakhon, Trat and Tak.

deliberately refrain from using contraceptives because they want to get pregnant (Somrat Sritakool 2007; Siriporn Jirawatkul, Kritaya Sawaengcharoen et al 2012).



Child marriage is a factor leading to adolescent pregnancy. By definition, child marriage occurs when at least one of the partners is under 18. Child marriage is more prevalent among adolescents who are not in school or those who receive less than primary education.

The 2010 National Population and Housing Census showed that 13.3 percent of girls aged 15-19 were either married or living with a sexual partner. This is consistent with data from a survey of child situation in Thailand - Multiple Indicators Cluster Surveys (MICS) No. 3 conducted in 2005-2006 by the National Statistical Office which interviewed females aged 15-49 from 43,470 households nationwide. In the survey, 19.7 percent of women aged 20-24 reported they had been married or had lived with their sexual partner before the age of 18. According to the MICS No. 4 in 2013, this figure had risen to 22.1 percent. Up to 60 percent of the women in this group had only completed primary school.



Percentage of females aged 15-24 who were married or had been married in 1960-2010

	1960	1070	1980	1990	2000	2010
15-19	13.8	19.0	16.7	14.9	11.7	13.3
20-24	61.3	62.1	56.5	51.8	44.5	40.0

Source: National Population and Housing Census, the National Statistical Office

The highest rates of marriage or sexual partnership among 15- to 19-year-olds are seen in six provinces - Chai Nat, Prachuap Khiri Khan, Phang-Nga, Rayong, Samut Sakhon and Uthai Thani. (see Table 6 in appendix). Three of these provinces have recorded the lowest levels of education among women.

First experience of sexual intercourse

Though many parents, guardians or teachers tell children to wait until they are married before having sex, many Thais begin having sexual intercourse in their teens.

According to data from the 2009 National Reproductive Health Survey conducted by the National Statistical Office on random samples of the nationwide population, 41.4 percent of citizens aged 15-24 reported ever having had sex. Of these, 29 percent were married and 12.4 percent were single.

In other words, among men aged 15-24 years old, 21.1 percent were unmarried men who reported ever having had sex and 19.5 percent were married men. Among women aged 15-24 years old, 3.4 percent were unmarried women who reported ever having had sex and 39 percent were married women.

Average age of first sexual intercourse is 13-15 years old

The monitoring of sexual behaviour among students, for which data is collected on a yearly basis by the Ministry of Public Health, reveals that in 2011 less than 5 percent of 8th graders had had sex, while almost a quarter of male 11th graders and about 16 percent of their female counterparts had had sex. This number rises to 41-50 percent among 2nd year vocational students, with many saying their first experience of sexual intercourse was when they were 13-15 years old.

⁶ The interpretation of data on average age for first sexual intercourse has limitations because the data does not represent the entire national population. Data only recorded the age respondants were when they said they were sexually active people, so the age at which they had their first sexual intercourse is probably lower than was reported. The average marriage age among Thai women is 22. (National Statistical Office's Reproductive Health Survey 2009)

Percentage of students who have had sexual intercourse

Toward Occurs	Percentage							
Target Group		2007	2008	2009	2010	2011		
1. 8th graders	Male	3.2	3.7	4.2	4.4	4.2		
	Female	1.9	2.3	2.6	3.0	3.0		
	Male	21.2	24.1	24.7	25.9	28.0		
2. 11th graders	Female	12.9	14.7	13.9	15.5	16.4		
3. 2nd year vocational students	Male	40.2	43.3	44.0	46.6	49.8		
	Female	34.1	36.5	37.4	41.0	41.6		

Source: Behavioural Surveillance Survey on HIV/AIDS infection among student in Thailand 2007-2011 by the Bureau of Epidemiology, Department of Disease Control

Sites where students have their first sexual intercourse (percentages)

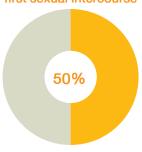
						(1	0 /
			2010			2011	
Sites		8th grade	11th grade	2nd yr voc.	8th grade	11th grade	2nd yr voc.
5: "	Male	67.9	72.0	64.0	69.0	69.4	62.3
Friend's home / Own home	Female	62.7	63.5	57.9	68.8	65.3	56.4
Hotel / Apartment / Rented	Male	9.9	12.7	13.5	10.6	14.8	17.4
room	Female	14.8	14.8	13.2	9.8	14.4	16.4
	Male	13.1	11.9	19.7	11.5	9.8	16.1
Dormitory	Female	9.3	11.6	20.2	9.0	9.4	17.3
Other	Male	9.1	3.4	2.8	5.0	3.5	2.4
	Female	13.2	10.1	8.7	9.0	9.3	8.5

Source: Behavioural Surveillance Survey on HIV/AIDS infection among student in Thailand 2007-2011 by the Bureau of Epidemiology, Department of Disease Control

As for the location where teenagers first had sexual intercourse, more than half said it was at home, followed by hotel, rented room or dormitory. This raises the question: To what extent have parents discussed sexual intimacy and relationships with their offspring? A 2006 survey revealed that only 59 percent of the parents said they were aware "all the time" or "most of the time" of their children's whereabouts. Legally and morally, adolescents have not reached the age of majority and their parents are accountable and responsible for their actions. However, as things stand, young people, especially girls, are the only ones held accountable for their sexual behaviour. This is especially so in families where parents have not had sufficient discussions with their children to equip them with age-appropriate knowledge on reproductive health.

It is interesting to note that while "home" continues to account for almost two-thirds of the answers given, there is a marked shift from "dormitory" to "hotel/apartment/ rented room". This would be in line with the generally higher levels of disposable income observed in the general population. It would also point towards the potential in increasing the agency of young women and girls to negotiate safer sex.

Condom use during the first sexual intercourse



Use of condoms among teens

The Behavioural Surveillance Survey on HIV/AIDS infection among students in Thailand in 2011 reveals that condom use among students has gradually increased over time.

A comparison of condom usage between first and last sexual intercourse reveals that the percentage of female students who reported that their partner used a condom during the most recent intercourse is much lower than for the first time, especially among 2nd year vocational-school female students. This may, in part, be due to the fact that female students use other methods to prevent pregnancy. such as contraceptive pills, rhythm method or emergency contraception.

Despite the rise in use of condoms from 2007 to 2011, it is important to note that the percentage of both male and female students who reported using a condom every time is consistently very low.

Percentage of students who reported using condom during their first sexual intercourse, their most recent sexual intercourse and every time

11th	graders	2007	2008	2009	2010	2011
Male						
	First sex	49.7	51.1	51.5	51.0	51.1
Ŵ	Last sex	44.1	44.7	46.3	47.9	51.2
••	Every time	25.0	27.3	28.2	28.4	28.2
Female						
	First sex	46.3	49.9	47.6	49.2	54.1
	Last sex	34.6	38.1	34.7	38.1	46.5
"	Every time	19.7	20.4	19.6	21.3	22.7
2nd year	r vocational udents	2007	2008	2009	2010	2011
2nd year stu Male	r vocational udents	2007	2008	2009	2010	2011
stu	r vocational udents First sex	2007 48.3	2008 48.3	2009 51.4	2010 49.4	2011 55.0
Male	udents					
stu	First sex	48.3	48.3	51.4	49.4	55.0
Male	First sex Last sex	48.3 45.0	48.3 42.9	51.4 46.7	49.4 43.9	55.0 51.2
Male	First sex Last sex	48.3 45.0	48.3 42.9	51.4 46.7	49.4 43.9	55.0 51.2
Male	First sex Last sex Every time	48.3 45.0 23.2	48.3 42.9 23.0	51.4 46.7 26.1	49.4 43.9 23.7	55.0 51.2 28.9

Source: Behavioural Surveillance Survey on HIV/AIDS infection among students in Thailand in 2007-2011, the Bureau of Epidemiology, Department of Disease Control (http://www.boe. moph.go.th/files/report/20120501_1696357.pdf)

Teenagers' understanding of sex

Sexuality education including family planning and sexually transmitted disease is taught at the primary- or secondary-school level. Most students received some form of sexuality education at secondary school level (65.4 percent), and 12.5 percent at primary school level. Meanwhile 11.2 percent get no sex education. Those who cannot remember or are unsure whether they have ever been taught about the subject account for 3.6 percent. When divided by age, it was found that most people in the 15-19 and 20-24 age ranges had sex education at secondary school. However, the percentage of people aged 20-24 who have never received sex education is higher than in the 15-19 age range - 14.2 and 8.2 percent respectively (Reproductive Health Survey 2009).

Though most teenagers receive sex education in school, many still lack correct knowledge and understanding of sexual intercourse. Obviously, sex education lessons have limitations. They do not provide comprehensive knowledge about sexuality and reproductive health education, and lack positive communication about sex. Some teachers also have conservative attitudes and choose not to speak about sex, prefering to limit themselves to biological aspect instead.



Questions from 'Young Love' Project

In 2013, the "Women to Women" show on TV Channel 3, in cooperation with the Ministry of Public Health, the Women's Health Advocacy Foundation, Path for Health Organisation and the United Nations Population Fund, organised a campaign to provide knowledge about sex and prevention of adolescent pregnancy through activities at 12 schools. Here are some questions the participating students were asked:

What is sexual intercourse like?

- What happens if you do it from the rear?
- What should I do if I do not want to have sex? How do I say no?
- Is there a chance of contracting HIV/AIDS from sexual penetration by a finger?

What method of contraception do you use?

- Can I get pregnant from ejaculation outside the vagina?
- Can I get pregnant from having sex during menstruation?
- Is the "7 days before and 7 days after" method safe?
- Can the "morning after" pill prevent pregnancy? How do I take them?
- How do I to take calendar-based birth-control pills?
- Can menstruation-stimulants actually be used for abortion?
- Does taking birth-control pills cause infertility?
- (Question for parents) What do you consider is the best time for your teenager to get a contraceptive injection for effective protection?

How to communicate about sex?

- (Question for parents) A boy told my daughter that if she did not have sex with him, he would stop seeing her. How should I talk to my daughter?
- (Question for parents) My son just confessed that he has a boyfriend. What should I do?
- (Question for parents) I caught my son watching porn in his room. What should I do?
- (Question for parents) Can a girl in her early teens have a pelvic exam?
- (Question for parents) My son's girlfriend just moved in and refuses to go to school. What should I
- (Question for parents) What should I do if my daughter is gay and she wants to have breast removal
- If my friend gets pregnant but is afraid to tell her parents, what should I do?
- If I get pregnant, how do I handle my parents and my schooling?
- What should I say when a guy asks me to go to his place or a hotel?

Contraception and counselling for teenagers

The 2009 Reproductive Health Survey conducted by the National Statistical Office indicates that, in general, only 15.7 percent of sexually-active teenagers aged 15-19 have used contraception. The numbers are not different between men and women, though the ratio of contraception used among married teenagers aged 15-19 is higher at 79.8 percent. The methods of contraception preferred by married teens differ between the two genders. Nearly 60 percent of the women surveyed said they use birth-control pills, followed by injection, while men prefer using a condom or having their female partner take birth-control pills. Among single people, only 8.5 percent used birth control, of whom half of the women use birth-control pills, followed by female condoms, while most men said they used condoms.

Percentage of single and married male and females aged 15-24 who have used contraception, based on the method used in their most recent intercourse

	Single	but sexually-	active		Married	
	All	Male	Female	All	Male	Female
Used one of the methods	97.9	98.2	96.4	86.5	91.3	85.4
Birth-control pills	14.6	9.1	48.4	53.8	35.9	58.0
Emergency contraceptive / morning after pills	5.2	5.4	3.9	0.5	0.7	0.4
Contraceptive injection	1.8	0.5	9.4	17.0	8.2	19.1
Contraceptive implant	-	-	-	0.1	0.1	0.1
Intrauterine device	0.2	0.2	-	0.1	-	0.4
Condom	73.1	79.4	34.1	13.1	46.3	5.3
Female sterilisation	-	-	-	0.3	-	0.4
Safe period calculation	2.5	2.8	0.4	1.0	-	1.3
Others	0.6	0.7	0.1	0.7	-	0.8
None used	2.1	1.8	3.6	11.4	8.7	14.6

Source: Reproductive Health Survey 2009



Reasons why many teens aged 15-19 do not use contraception:

They want children (44%); they are concerned about health risks (26%); their husbands are rarely home (6 %); they have just given birth or miscarried (6%); their partners forbid it (3%); they have uterus/ovary problems (4%); other reasons

Source: Reproductive Health Survey 2009



Reasons for not using birth control given by 32.1% of women aged 15-19 who ended up having babies unintentionally:

They forgot to take oral or injected contraceptive (38.7%); they used a traditional method (e.g. ejaculation outside the vagina, safe period calculation) (28.9%); they did not think they would have sex (25.6%); they did not know about contraception (3%); they used a modern contraception method incorrectly (0.9%); they did not think they would get pregnant/thought getting pregnant would be difficult (0.9%); they were forced to have sex (0.9%); they had just given birth or miscarried (0.5%); they did not have time to buy a contraceptive device or access birth-control service (0.6%)

Source: Reproductive Health Survey 2009

Use of drugs and alcohol

Teenagers who use drugs or alcohol have a higher chance of getting pregnant than their abstemious peers, probably because their judgment of what is safe is impaired. People who are not fully sober or aware are more likely to forget to take contraceptives.



A study on the factors influencing pregnancy among vocational students aged 15-21 in Chiang Rai in 1999 revealed that, other than age and educational level being relevant to pregnancy, users of drugs like amphetamines and marijuana have approximately a 2-3 times higher chance of getting pregnant or impregnating others than those not using drugs (Manopaiboon, Kilmarx et al 2003). Similarly, there were more drug users among teenagers receiving prenatal care at Siriraj Hospital than their counterparts who were not pregnant (Siriwan Kampaengpan 2009). Though no clear relationship has been established, drug and alcohol use does constitute a rise in risk-taking behaviour that leads to pregnancy.

Other studies also indicate that drinking alcohol can contribute to premature sexual activity among adolescents (Anong Prasartwanakij et al 2009) and is a key cause of adolescent pregnancy (Kittipong Ubonsa-ad 2009). Nevertheless, other studies show that drinking alcohol does not have a statistically significant effect on pregnancy (Manopaiboon, Kilmarx et al 2003; Somrat Sritakool 2007). However, it has been indicated that male drinkers have 20 percent more unprotected sex than non-drinking males.

Differences among teenagers

Studies show that different groups of teenagers have different risk behaviour and risk-reducing skills, hence their reproductive health risks are also different. For instance, one study finds that adolescents in the Northeastern region have the lowest average age for their first sexual encounter, and when pregnant, most of them choose to keep the baby. Also, teenagers in the South have the lowest rate of condom usage compared to other regions (Siriporn Jirawatkul et al 2011). Meanwhile, a high prevalence of young marriages is found among underprivileged groups, tribal populations and poor families with no educational background because they lack financial means and need to quit school (Nicaise, Tonguthai et al 2000). Such differences should be taken into consideration when implementing reproductive health policies to solve the above-mentioned problems, and the measures and services provided should be tailored for target groups in line with their different economic, social and cultural contexts.



Teenagers' families

Teenagers' behaviour is partly determined by the type of family they grown up in, such as a nuclear family or extended family, and how they live, i.e., by themselves or in a dormitory. In addition, the economic and social status of the family affects the methods of nurturing, teaching and developing of values, as well as the educational opportunities of the teenager.



The relationship between teenagers and other family members is important. A survey of the opinions of teenage and working-age people conducted by Chulalongkorn University indicates that family factors play an important role in teenagers becoming pregnant (Pangpond Rak-amnuaykij et al 2013). A teenager who grows up in a loving family – has a good relationship with her parents and other family members, interacts and exchanges ideas, is taught discipline and other facts of life – is less likely to get pregnant than one who grows up in a family lacking such features.

The above information is consistent with studies finding that teenagers living in an extended family usually find a partner or get married later because they have relatives to consult with (Jahan 2008). More often than not, parents of pregnant adolescents do not have a secure job, have low income and have not completed their education. The divorce rate among these parents tends to be higher than families in which there is no pregnant adolescent. Teenage pregnancy shows a significant statistical correlation with total household income, parents' marital status, method of nurturing, history of teenage pregnancy in the mother and relatives, and relationship with siblings (Siriwan Kampaengpan 2009).

However, other studies have found that family factors have little or no significance in the incidence of teenage pregnancy. For example, a study by Podhisita (2004) indicates that the educational level and income of parents, the relationship between the teen and her parents or siblings, and family discipline are a poor prediction of premature sex. Similarly, a study by Manopaibul (2003), conducted exclusively on vocational students in Chiang Rai province, found that family structure (including living alone), separation of parents and the relationship between the teenager and other family members, have no effects on adolescent pregnancy rates.

Oui is now 18. She gave birth when she was 17.

Oui comes from a poor family. Though she was always encouraged by her mother to get a good education, she ignored the advice because she did not like studying. After finishing 9th grade, she quit school and spent her days hanging out with friends. She then began going out with a 24-year-old, and was often seen at his place. Her parents knew about their relationship. Oui did not use protection when having sex with her boyfriend. This went on for a year before she conceived at the age of 17. Then she asked her mother for advice, and in the end, Oui and her boyfriend had to undergo a wrist-binding ceremony, equivalent to a wedding. After that, her husband moved in with her.

"When I got pregnant, I was very worried and afraid that I wouldn't be able to raise the child, because I was still young and had no sense of motherhood at all. I still liked hanging out with my friends. But, my mum helped and gave me moral support, so I felt less concerned. While I was pregnant and right after giving birth, I continued going out with my friends, sometimes leaving the baby behind with my mum. This was because right after giving birth, I was very upset and didn't know how to handle things. Later, I had to stop going out because my mum insisted that I raise my child. This made me become more maternal and more concerned about my child. I have grown up."

When she fell pregnant, Oui's husband had to start working because her mother did not earn enough to support all of them. Though Oui had to be a full-time mother at first, once her child was old enough to go to school, she had to start looking for a job.

In relation to her child's education, Oui said she intends to get her offspring a good education. However, if her child should fall pregnant in her teenage years, she would consider it inevitable, as Oui's parents were also teenagers when they had her.

Oui is now in non-formal education seeking a high-school qualification in order to get a job.

Environment, society and culture

Environment, society and culture all have an impact on adolescent pregnancy rates. This can include having a friend whose behaviour leads to risks of getting pregnant (Siriwan Kampaengpan 2009), a friend who talks one into risky sexual behaviour, exposure to sexual messages in the media and or the Internet (Pangpond Rakamnuaykij et al 2013), local traditions and beliefs, and behaviour associated with events such as Valentine's Day (Suradej Boonyawet et al 2008).



Some studies also indicate that violence and sexual coercion are important factors leading to sexual intercourse and pregnancy among Thai teenagers (Manopaiboon, Kilmarx et al 2003; Anong Prasartwanakij et al 2009). In the North and Northeast regions, the percentages of women who get married or move in with a man before turning 18 are 23.5 percent and 23.8 percent respectively - higher than in other regions. Almost 30 percent of teenagers who get married before the age of 18 live in a household where a regional dialect other than Thai is spoken (National Statistical Office 2006), which appears to indicate the strong influence of culture on cohabitation decision-making, before the girls are mentally and physically mature.

Limitations of adolescent pregnancy data

Even though studies on the role different factors play in adolescent pregnancy in Thailand are available, there are limitations on the quantity and quality of date available. Some studies have unclear research methodology or data analysis, while most are based at the sub-district/district level and conducted on a small sample group. To be more beneficial in preventing and solving problems at the local level, studies must use appropriate research methodology, focus on quality and on the same population group in a longitudinal study. As for available systematic studies at the national level, some are opinion surveys conducted among different groups on factors affecting adolescent pregnancy. Thus, studies of factors related to teen pregnancy should be further developed in order to obtain the information needed to draw up effective policies for handling adolescent pregnancy.



Conclusion

Factors leading to pregnancy among adolescents are complex and inter-related. Viewed holistically, it is clear that aspects such as education, social and financial status, as well as family and community norms and pressures, encourage teens to agree to unsafe sex. To bring about changes in these factors, cooperation and consistency in the work of all parties involved, especially from the government sector, are extremely important. Such attempts should include the protection of teenagers' right to receive education, information about sex and reproductive health and related services, as well as protection from sexual abuse, coercion or violence whether at home or elsewhere. Awareness of these basic human rights is important and should be the essence of all work, including legislation, policymaking or projects, seeking effective solutions for the problem of adolescent pregnancy.





Social perception of adolescent pregnancy

In 2013, the "National Hormones Days" phenomenon saw teenagers eagerly awaiting each episode of "Hormones", a cable television drama series reflecting teen behaviour, especially sex in school. It was a talk-of-the-town show and a topic of discussion that divided opinion in the online community. The main contentious issue concerned the show's "morality", particularly its portrayal of sexual behaviour among school-age children. Comments included, "It's the truth, why deny it?", "This is how our society has been for a long time", "Does a series like 'Hormones' really cause a decline in morality?", etc.

The social debate on "Hormones" could, therefore, be a good reflection of changing attitudes among Thai teens amid long-standing cultural norms concerning virginity, premarital sex and premarital pregnancy.

Nonetheless, the issues discussed with regard to teenage behaviour in "Hormones" still focused on changing their behaviour, seeing adolescents as the problem rather than addressing the underlying causes - such as social conditions, values no longer shared by young people, or the failure of parents, teachers and health providers to empower the young to make responsible decisions.

The contents of this chapter reflect a variety of social perspectives toward teenage pregnancy. Part of the information is derived from interviews and stories told by people who have been involved with issues of adolescents and pregnancy.

Teachers' perceptions on adolescent pregnancy

Teachers spend more time with some teenage students than the students' parents do. Their job is to impart knowledge and life skills to the teens. Class teachers or school counsellors often have a good understanding of the habits and behaviour of the students under their care and are aware of the problems they typically face.

In interviews, teachers from both ordinary and vocational education institutions have remarked that some pregnant teens live with older relatives, such as grandparents, rather than with their parents⁷, indicating a lack of close parenting. Some teachers who have had the experience of their students becoming pregnant find the idea of sex and pregnancy among school-age children highly inappropriate. In general, adolescent sexuality and pregnancy are couched in terms of being "wrong" and "inappropriate", with the blame squarely pinned on the girl and, to a lesser extent, on the boy in question. Attitudes are punitive rather than supportive, and rarely do teachers and school administrators assume a measure of responsibility for not having provided students with the information and skill that might prevent them from getting pregnant. It is a fact that while there has been legislation for sex education in school since 1938, it was first taught only in 1978 and then only in certain schools that were ready to include sex education in other subjects, such as health education. However, the teaching of sex education depends on each school's administration and teachers, and it is not seriously offered in every school nationwide.

Statistical Office)



^{10.1%} of all households have elderly people living only with their grandchildren (Senior Citizen Survey 2012, National

"Pregnancy in school is absolutely inappropriate. However, if it has happened, we, as secondary school teachers, must focus on solving the problem. Teenagers are always curious to know and try things. Most of those who get pregnant do not live with their parents; rather, they live with their grandparents. Definitely, the elderly cannot keep up with the kids because of the generation gap. When the kids get pregnant, some just choose to quit school. However, teachers who know which students are pregnant will act as if they didn't know. When they are due, the students will take about a week off and then return to school. We know they are absent to give birth, but some of them are already in 12th grade, so we want them to graduate anyway and help them."

Former secondary school teacher in a provincial school, August 11, 2013

"They are students and they get pregnant: that is wrong and inappropriate for their age. But should we make it worse by asking them to leave school? If we let them continue studying and graduate, at least they will have the knowledge to get a job. For those who feel too embarrassed and want to quit, we have to force them to stay, and ask what else they could do. This happens every year, constantly. We observe their abnormal weight gain, and so we ask them. When we are sure that they are pregnant, we estimate the delivery time to see if it will be before the exams. If the pregnancy does not look too obvious, we let them come to classes normally. If it is obvious, we suspend them and let them come back after the delivery. Many of them return and do graduate, both at the vocational and highvocational levels."

Technical college teacher, August 16, 2013

Interviews with teachers and students in a number of schools tell us that teachers have influence over giving students knowledge about sex education. Teachers who understand the importance of sex education usually incorporate it into their own subjects, such as biology, physical education, career guidance or health education.

For example, according to information from a secondary school in Bangkok, the basic content of its health-education subject talks about sexual behaviour, teenager's self-control, unintended pregnancy as well as the traditional view of sex in Thai culture. In some instructors' view, the teenage perception of sex has changed. They think it is acceptable to have sex before marriage. Additionally, the Internet and social networks provide opportunities for them to access information widely and quickly. Many teachers realise that it is impossible to forbid children from having sex, so they focus on protection, teaching them about family planning, using examples from video clips on YouTube and the media to teach them how to use a condom and implement familyplanning methods.

Aside from this, some schools organise campaigns and senior-junior mentoring activities, make short movie clips, focusing on participation and the children's own contribution. Some might also hold a rally, which includes stations for sharing of sexual experience and a condom-wearing contest.

"Mostly, we do activities with 8th graders who are fully into their teens, when they are most wayward and have all started their periods, and also 10th graders who are approaching college, with their bodies fully developed and with more maturity."

Secondary school health education teacher, July 11, 2013

Each teacher has his or her own way of assessing which kids are most at risk of having sex and getting pregnant. Those teachers will have private chats with the kids. However, some students considered at risk, turn out to know how to prevent pregnancy. Some use intrauterine devices, take contraceptive injections or have implants. On the other hand, students not considered at risk by teachers sometimes end up being pregnant. Therefore, it is impossible to determine what types of risks bring about pregnancy among students. It is also difficult to identify the risk patterns, and the students who are at risk. There is no certainty when it comes to the related factors.

According to teachers, most of the pregnant teenagers trust their male partners' ability to control the situation and not impregnate them. Some parents know about the relationship but are unable to prevent the girls from getting pregnant. Some pregnant schoolgirls do not live with their parents, or the parents work late, so are distanced from parental authority. Some adolescent couples are so open about their relationship that they go to school together and are seen with each other all the time. Some schools warn students against open displays of affection in school. When a girl gets pregnant, the disciplinary department will invite her parents to talk and work together to find possible solutions. Some are willing to continue with their study until graduation, some ask to drop out for a while and some ask to move to another school. However, in most cases of pregnancy among high-school students, their parents have them guit.

If a student gets pregnant, the teacher may have a private talk with her in order to encourage her to continue with her studies.

"We tell other students that this problem should not be ridiculed. No one wants it to happen, so we must not hurt our friend. It is admirable that our friend is determined to continue with her studies and graduate; therefore, we are not supposed to obstruct or discourage her. We should give her support. It will be a good thing to help our friend graduate. At the same time, we also teach them that, after seeing the consequences, they should take care of themselves. We always emphasise that it is okay to have a boyfriend/girlfriend, but you have to behave appropriately; otherwise, you will lose your future. You will feel embarrassed returning to school. If you do not want it to happen, pay attention to your studies."

Secondary school health education teacher, July 11, 2013

Teenagers' perceptions of adolescent pregnancy

"I have friends who have had sex and I questioned them about it. Anyway, I think at our young age, love is not permanent because we will get to meet a lot more people. Having sex at our age has many risks, like pregnancy, diseases, stress and bad grades. I can understand if my friends have sex in school. They are not doing anything bad. It is natural now and is widely acceptable. I've asked my friends if they use condoms when they have sex and told them they should carry some. It is normal for girls to carry condoms to protect ourselves, because men don't always bring one."

Pan, 15-year-old high-school student in Bangkok, July 11, 2013

There are a number of studies on the attitudes of Thai teenagers, both in and out of school, towards sexual intercourse and pregnancy among their peers. The results show that many teenagers, especially students, think adolescent pregnancy is inappropriate because the girls are not ready to take care of their children. Many also claim that pregnancy is shameful and unacceptable in Thai society and that it ruins the girl's future. Some studies find that 60 percent of the respondent teenagers think abortion is acceptable (Fengxue, Isaranurug et al. 2003). The same studies, however, also indicate that some teenagers think abortion destroys morality in society and that their peers should not have the right to a termination. Nevertheless, some see abortion as a solution that prevents students from having to quit school and experience financial burden. They also maintain that abortion helps prevent babies from being abandoned. Another study suggests that most teenagers are against premarital pregnancy because it ruins self-esteem, making them feel worthless. They say it cuts short their teenage life, preventing them from socialising with their peers because they have to take care of the baby (Muangpin, Tiansawad et al. 2010). Some of the aforementioned opinions are consistent with those derived from interviews:

"Why can't they think straight? Teachers do teach us about it and talk about this problem. There are ads on TV and training courses. They should have realised that it is not right. Our duty at this age is to study. If you want to get pregnant, you need to have graduated and be mature enough to raise the child. I think it is because of their curiosity and they want to try it, but then they screw up. I have nothing against them, though. I would give them moral support. I wouldn't agree if the school asked them to quit, though suspending them to give them time to resolve things would be enough. However, coming to school pregnant does not sound right either. Pregnant or not, everyone has the right to



study. Abortion has never crossed my mind. It is murder, isn't it? We are the ones who cause them [babies] to exist, even unintentionally, so we have to be responsible for their lives."

15-year-old female student, August 16, 2013

"When I was about to graduate high school, a classmate of mine got pregnant. I was so shocked because our class was the school's top class academically, full of good students. I was definitely not expecting something like that. Then, I learned that she had an abortion. To me, that was evil. I think she will never be successful, as she made a mistake and then committed a sin, too."

18-year-old female student, August 16, 2013

While teens tend not to agree with teenage pregnancy in school, many adolescents, particularly boys, think having sex is a physical aspect of love, and that it is normal for a couple to have sexual intercourse when they are in a relationship (Siriporn Jirawatkul, Kritaya Sawaengcharoen et al 2013). For teenage girls, sex is often an emotional aspect of a relationship. Consenting to sex is an expression of love, sincerity and the desire to build an intimate relationship or to "bind" their male partners (Tangmunkongvorakul, Carmichael et al 2011). Some studies suggest that many girls desire a baby in order to secure their relationship with their partner or his continuing attention (Siriporn Jirawatkul, Kritaya Sawaengcharoen et al. 2012).

Stories of teen couples

Som gave birth at the age of 19. She is now 22.

When Som was 18 and in 11th grade, she met the man who was to father her child. He was two years older. Thinking he would be her only true love, she moved in with him. Both of their families were aware of the situation. A year later, Som got pregnant. It was unintended, and Som never thought she would get pregnant at that age because, even though they did not use a condom or birth-control pills, they applied other methods, like the rhythm method or coitus interruptus.

Som got pregnant after she had graduated from high school and was waiting to get into university. She was already four months into the pregnancy when she found out about it. Her first feeling was fear. She was afraid her mother would scold her and get upset. So she consulted an older student at school, who was also pregnant, on how to talk to her family. The older student suggested that she discuss the issue with her boyfriend and be truthful with her family.

Som's boyfriend asked her to get an abortion, reasoning that they were not ready to have a child. Som never considered an abortion, so she had to tell her mother. Her mother was sad and cried, but eventually gave Som her support, saying that everything would be all right and that she would help raise the child. The boyfriend's family did not object, but they were not ready to take responsibility by having him marry Som. They could only help with the child and some expenses.

Som and her boyfriend lived together for 3-4 months after the baby was born. The boy's parents gave quite a lot of financial support, covering general expenses, delivery expenses, and the baby's stuff. They also helped take care of the baby for a while before the couple broke up.

Som is now 22 and has a new boyfriend, who is 28. She has a job and is continuing her studies. Her life now is focused on the job and studying.

Som thinks having sex at school age is not wrong, but that not using protection is wrong. However, she says the worst thing is not taking responsibility when the problem occurs or deciding to do something even worse. Society should teach teenagers how to prevent pregnancy rather than forbidding them from having sex. Also, she thinks being a teenage mother is better than being a teenager who opted for an abortion. This kind of mistake happens to a lot of teenagers these days, but only a few choose to take responsibility for the child rather than having an abortion.

Ladda gave birth at the age of 19. She is now 24.

Ladda was born into a farmers' family in rural Thailand. Her parents did not push for their daughter to get higher education. After finishing 9th grade, Ladda quit school and helped her parents' work, but continued with non-formal education until she graduated high school.

Her husband is 3 years older and they went to the same school. Ladda got married when she was 18. One year later, when her husband finished high school, they had a baby immediately. Their daughter is now 4-years-and-7-months old. They are not ready to have a second child yet because they are still busy raising the first one.

Ladda admits that being a mum at such a young age was very problematic. Immaturity caused stress and mood swings. Though she moved in with her in-laws who sometimes helped take care of the baby, she still had to be fully in charge. As a result, she could not go to work until her daughter turned 2-and-a-half and started going to school. Since everybody in the family was working, she had to be the only one to make decisions about the baby when problems arose, which was very tough for her. As she could not find anyone to consult with, she had to rely on the Internet.

Currently, Ladda is studying for a bachelor's degree, while her husband already has his.

Suwat had a child when he was 18. He is now 27.

Suwat learned he was going to be a father when he was 18. He had just been admitted to the Armed Forces Academies Preparatory School, but decided not to show up at the enrolment. As he was going to have a child, he decided to start looking for a job instead of continuing with his education.

The mother-to-be was a 16-year-old girl Suwat had met at a pub. They had sex for the first time just 3 days after they first met, and started dating. Suwat used a condom the first time, but became careless afterwards. Two months later, the girl got pregnant. Neither was ready for a child and people advised them to get an abortion. However, they were scared, and this was their first relationship. They thought they would fall in love once they lived together, so they decided to keep the baby. They thought about it for several weeks before deciding to tell their parents.

The problem was that Suwat had to quit school and take up a job before the baby was born. Then, his girlfriend also wanted to work, so they both decided to get jobs to earn enough to support the child. The first year of their life as a couple was difficult. In the second year, they started to argue a lot. By the end of that year, Suwat's girlfriend had left him for a new partner. Stressed out, Suwat drank heavily throughout his first four years as a father and became an alcoholic.

Suwat's son is now 7. He is proud of his child, who has grown up to be a well-behaved boy. However, looking back, Suwat regrets wasting time and opportunities to do something better in his life. He intends to teach and discuss sexrelated matters with his son, so that he will not make the same mistake as his father.





Parents' perceptions of teenage pregnancy

Studies conducted in Thailand indicate that parents recognise teenage pregnancy as a significant problem in Thai society and strongly object if their teenage daughters get pregnant or if their teenage sons impregnate someone. Some parents of pregnant girls feel ashamed (Nicaise, Tonguthai et al. 2000; Jahan 2008). Meanwhile, parents worry that messages from the media influence the behaviour of young people when it comes to sexuality. Parents indicate that they do not have time to closely supervise their children, and find it difficult to prohibit sex among teenagers. Consequently, they try to advise their children to be careful and to protect themselves against pregnancy and sexually transmitted diseases, especially HIV/AIDS (Rhucharoenpornpanich, Chamratrithirong et al. 2012).

Interviews with parents of both male and female teenagers yield viewpoints consistent with the results of the studies mentioned above. They say that parents of pregnant teenagers should give their children opportunities, advice and support, because the parents may themselves be part of the cause. Regarding abortion, parents' views differ. Some do not agree with pregnant adolescents getting abortions because it is a "sin" and also a health risk. Others think abortion may be a good option, particularly for teenage mothers who would be incapable of giving a good life to their children once they are born.

"If I had a daughter and she got pregnant, I would be furious. But we are family, so we have to give her a chance anyway. She is my daughter. When she has made a mistake and is in trouble, we have to help her fix it. I think the parents are also to blame. Regarding abortion, other people see it as a sin, but I think that is not always the case. I think we have to consider the readiness of girl to be a mother. Some families are already in bad shape. Letting the child suffer in a poor environment is an even worse sin than abortion."

54-year-old government official, father of an 18-year-old son, August 15, 2013

Media perception of teenage pregnancy

The media have a big influence on society, as they disseminate a wide variety of easily accessible information, which includes data on pregnancy and abortion among teens. A survey conducted in a district in Nakhon Pathom province found that approximately 97 percent of high-school students receive such information from the media, whereas only 70 percent receive the same information from their parents (Fengxue, Isaranurug et al 2003).

Media often still present adolescent pregnancies negatively. They often portray the girls as bad, failing to mention the factors that led to these girls getting pregnant in the first place. They rarely speak of sexual abuse, lack of paternal authority or what role their families played in the problem. News stories about adolescent pregnancy usually focus on the mother alone. Pregnant teenagers are thus branded as bad girls, or worse if the girl decides to get an abortion. Such perceptions certainly increase the pressure on pregnant adolescents who are not receiving any support. Also, it is unfortunate that the question of the teenagers' legal rights in relation to reproductive health is not sufficiently discussed in public.

From a survey on unplanned pregnancy among teens, stories and images presented by the media can be summarised as follows:

Mainstream media - Media outlets such as print media and TV, mostly present negative headlines that condemn adolescent behaviour. For example:

- Heartless girl with a bad life has had 2 abortions
- Baby left in taxi by mean teen mum
- Sad story: spoilt 17-year-old dead after abortion in a resort
- Shocking! No. of teen mums skyrockets; pregnant 11-year-old gives birth
- 14-year-old boy rapes 6-year-old girl, claiming he read a porn mag borrowed from a friend and became sexually aroused



TV drama series - Drama series have a significant influence on society. In the past, such shows rarely touched on the issue of teenage pregnancy. However, in 2013 the series "Hormones" sought to reflect the real lives of Thai teenagers with storylines of sex in high school. Most of the teenage characters think sex before marriage is acceptable and normal in modern society. One of their watchwords is, "If you want Sprite, use a bag". (Sprite is a female character who has sex with lots of guys, but always uses protection.) Feedback for "Hormones" reflects the changing values of its mainly teenage audience, which is broadly accepting of main characters having premarital sex, but the sex must remain safe.

Social media - A survey of threads on Pantip.com and Facebook reveals much conversation and communication related to sexual experiences among the online community. These include personal conversations as well as topics discussed in large groups. At the personal level, teenagers usually communicate and exchange ideas frankly. However, since they are of the same age, the advice given by one to another may not be the best. For example, on one thread about pregnancy, many suggested that abortion was the only solution. Threads on the Dek-D and Pantip websites are usually related to sexual experiences among teens. People posting comments are straightforward.

New technology has become more popular among the adolescents. Children, on average, spend about 2-3 hours watching TV every day. Young people also tend to spend hours on the Internet and their smartphones every day. Social media has become an increasingly popular mode of communication for the new generation.

Politicians' perceptions of teenage pregnancy

Politicians' views on teenage pregnancy encompass their awareness of the problems and ideas for measures to tackle them. The problem of adolescent pregnancy is a social and national policy issue:

"The problem of teenage pregnancy is mostly caused by inconsistent use of contraception methods, lack of protection and knowledge, and misunderstanding about sexual intercourse, thinking that a single act of sexual intercourse cannot cause pregnancy or that using a condom would ruin sexual sensation. Moreover, teenagers are afraid of coming to receive contraceptive services. The result is that the majority of teenagers do not get access to the services."

> Pradit Sintavanarong, Minister of Public Health Naew Na newspaper, March 18, 2013

"The committee is of the opinion that the target groups, which need our attention, are youths in the education system. We need to make adults understand that sex among teenagers cannot be prohibited these days. The point is how to make sure they have protection and access to contraception. Social media should be used as a channel to answer the teens' questions. Avoid face-to-face interaction. Moreover, the available services for unprepared pregnancy must be brought out. For example, people should be more involved in clinics, and condoms should be made available for free from machines or via the Internet."

> Pradit Sintavanarong, Minister of Public Health National Reproductive Health Development Committee, June 26, 2013

"The work to prevent unprepared pregnancy needs an integrated cooperative approach. The Ministry of Education seriously needs to provide the knowledge, but I do not want the teaching of things that would stimulate their curiosity about sex. Teaching teenagers how to use condoms is good, but the teaching process must be psychologically appropriate, otherwise, the teens may feel like trying it. Simultaneously, we also have to teach them to respect women in order for them to be able to restrain themselves. Modern parents should be more democratic. Some families just don't allow their children to have friends of the opposite sex or even talk about sex. They should listen to their children's problems and opinions rather than just giving orders, which only makes them feel uncomfortable and defiant. The parents must be more open-minded about sex."

> Paveena Hongsakul, Minister of Social Development and Human Security, "The Chat Room" show on Voice TV, August 12, 2013

The opinions and perspectives on teenage pregnancy, its negative impact at the personal and social levels, and views on the management of such problems, are moving in a direction to protect the rights of teenagers and to act so that they can fulfil their potential. Dealing with the problem by focusing solely on changing teenagers' behaviour to prevent sex is not tackling the problem at its root. Instead, safe sex and responsibility should be emphasised.

Conclusion

Society's views on teenage pregnancy reflect a variety of perspectives. Teachers and schools play a significant role in imparting knowledge and comprehension to students through the teaching of sex education and offering support and consultation when they get pregnant. Thus, teachers' attitude and understanding and schools' policy towards solutions for teenage mothers are important. Moreover, the family has an essential role to play in influencing teenagers' behaviour.

The most important question is how to enable society to provide support and care to young people so that they can enjoy protection and the freedom to think for themselves, while also being aware of the possible consequences of their choices. Additionally, the children should be given access to information that can help them make their own decisions, with their privacy preserved, and they should be given the opportunity for self-development. Thus, the problem should be dealt with through working in partnership, across sectors and in collaboration with adolescents themselves, to reduce the problems and consequences of unprotected sex.

The impact of adolescent pregnancy

When a girl gets pregnant or has a baby, her basic rights, including her right to health and education, are likely lessened. She may also be hampered in her effort to live her life to its full potential, in economic, emotional and social terms, which potentially sets the stage for a vicious cycle of poverty.

Broad impact on many aspects of the girl's life Impact on Health

Medical experts note that health problems are more likely if a girl becomes pregnant within 2 years of menarche or when her pelvis and birth canal are still growing. In addition, studies in several countries have found that pregnant adolescents usually come from families with low income and often suffer malnutrition. Girls who are 15 or younger are at a higher risk for conditions such as eclampsia, anaemia, postpartum haemorrhaging and puerperal endometritis than older adolescents (Neal, Sarah, et al 2012). Adolescent pregnancy can also lead to maternal dealth, illness and disability. Due to physical immaturity, complications from unsafe abortions, compounded by lack of access to routine and emergency care, are more likel to occur. Teenagers who decide to terminate their pregnancy in countries where abortion is illegal, like Thailand, are at a significantly higher risk of complications that can lead to disability or death than are their counterparts in countries where abortion is legal (Jones, Forrest et al 1985; Miller 2000).

Sexually-transmitted infections

Each year, Thailand sees almost 10,000 new cases of HIV/AIDS and the trend of sexually transmitted infection among juveniles aged 15-24 is increasing. Although sexually transmitted infections are not a consequence of teenage pregnancy, they are a consequence of unsafe sexual behaviour which may also lead to adolescent pregnancy. If not treated properly, sexually transmitted infections can contribute to infertility, pelvic inflammatory disease, ectopic pregnancy and cancer, as well as low birth weight, premature deliveries and lifelong physical and neurological conditions for children.

Young women are made more vulnerable to HIV/AIDS infection by biological factors, having much older sex partners, lack of access to information and services, and social norms and values that undermine their ability to protect themselves. They are more vulnerable due to economic hardship and face greater reproductive health risks related to the exchange of sex for money and other necessities. (World Health Organisation 2009a)

Risks to the newborn's health

Stillbirths and newborn deaths are 50 percent higher among infants of adolescent mothers than among infants of mothers between the ages of 20 and 29 (World Health Organisation 2012a). Their chances of preterm birth and low birth weight are approximately 1.2-2.7 times higher than babies born to mothers aged 20-24 (Cunnington 2001). Additionally, pregnant adolescents' inability to access treatment leads to a higher risk of mother-to-child transmission of HIV/AIDS. Due to this and other factors, including the girl's lack of emotional preparedness for motherhood, approximately 1 million babies born to adolescent mothers worldwide die before they turn a year old.

Adolescent mothers are also less likely to receive proper prenatal care, and to have a higher chance of having a C-section or other kinds of surgical childbirth, and suffer postnatal depression (Thaithae and Thato 2011; Kaewjanta 2012). These factors are not related to the physiological limitations of pregnant teens, but they are caused by other co-factors, such as education and financial status.

In respect to medium- and long-term effects on the health of children born to adolescent mothers, it is found that these children are at a higher risk of malnutrition and insufficient development stimulation. As a result, their physical growth and intellectual and learning development are inferior to children born to mothers in older age ranges (Jones, Forrest et al 1985). In addition, at least one report shows that pregnanct adolescents tend to drink alcohol and smoke more than older pregnant women. This can directly affect their health and that of their babies. There are also indirect effects on health, such as neglect or physical abuse when the mother is drunk, both during and after pregnancy. (Corcoran 1998; Kearney and Levine 2012).

Health problems associated with adolescent pregnancy and childbirth are caused by both biological and environmental factors governing the behavioural, social and economic context of the mother. These problems may occur during pregnancy, childbirth and after the birth, and may be short-, medium- or longterm. Some may be fatal, such as preterm birth, while others often cause permanent physical or mental disability, such as the stunted growth and development of babies born to adolescent mothers.

Abortion and baby abandonment

The decision to get an abortion reflects the confusion, frustration and extreme anxiety suffered by adolescent mothers when they realise they are pregnant. A study several years ago reveals that almost half of all women who get an abortion in Thailand are under 20 years of age and 30 percent of illegal abortions are undergone by teens (Warakamin, Boonthai et al 2004). Of all adolescents who undergo abortions, 24 percent are students (Intaraprasert and Pattarachai 2006). While specific numbers are not available, estimates of abortions performed on girls under the age of 19 range from 30 percent to as many as 90 percent of all pregnancies in this age group. For instance, a study on vocational students in Chiang Rai province shows that 90 percent of all 153 cases of pregnancy chose to have an abortion (Manopaiboon, Kilmarx et al 2003). Only a fraction of these will be registered through the health system, as most girls may have had access to safe abortions and therefore not show up at health centres for treatment of complications.

With approximately 129,000 babies born to adolescents in Thailand every year, a conservative estimate of teenage pregnancies would be as high as 250,000-300,000. A study in the Northeast region in 2007 indicates that more than 90 percent of pregnant adolescents become pregnant unintentionally. Not wanting to quit school or reveal the pregnancy to their parents, approximately 70 percent choose to buy selfprescribed aborticides in the forms of suppositories, menstrual stimulant pills/liquids or alcohol, or go to illegal abortion clinics. (Anusornteerakul, Khamanarong et al 2008).

The discovery of the remains of 2,002 aborted foetuses at Phai Ngern Temple in late 2010 is evidence that illegal abortion remains an option for unplanned pregnancies while at the same time reflecting the obstacles to accessing good-quality and safe fertility-health services in Thailand (Chaturachinda 2011).

Reports of adolescent mothers abandoning children appear in the Thai media from time to time. When a newborn is found abandoned in a public place, the presumption is that it was born to a young mother. However, the numbers reported in the media come nowhere near reflecting the real number of abandoned babies, as newborns and young children left at hospitals and charity homes rarely make the news. There are also those children who are left with their grandparents, relatives or other caregivers without sufficient care from their parents since both parents need to work in other provinces (Thai Family Research and Development Centre 2010).

No precise statistics for the number of babies abandoned by adolescent mothers exist. Instead, data from different organisations offers a partial picture. For example, the "Child, Juvenile and the Socially-Disadvantaged Situations" website of the Quality Learning Foundation (QLF) (updated May 1, 2012) indicates that 88,730 children have been left at hospitals, nursery homes and public places because their mothers were unable or unwilling to take care of them. Meanwhile, many studies show that several abandoned children suffer slower physical, mental and intellectual development than their peers with parents.

"Ten years ago when I started as an assistant undertaker, my supervisor introduced me to Koh's mother. She was working as a medical assistant at the hospital. She asked if I could store and destroy infant corpses. I knew that the corpse compartments in Pai Ngern Monastery were 1 metre by 80 centimetres, so I agreed. I received 500 THB each time. Every Friday to Sunday, Koh's mother brought a couple of bags containing infant corpses. I never opened them because I knew what was in the bags. I kept on taking the infant corpses, and I didn't have the chance to burn them until the compartment was full. I then moved to another compartment, but one day someone locked the compartment. Eventually I found out that Mr. Mana was the person who locked the compartments. He had been taking infant corpses from someone as well."

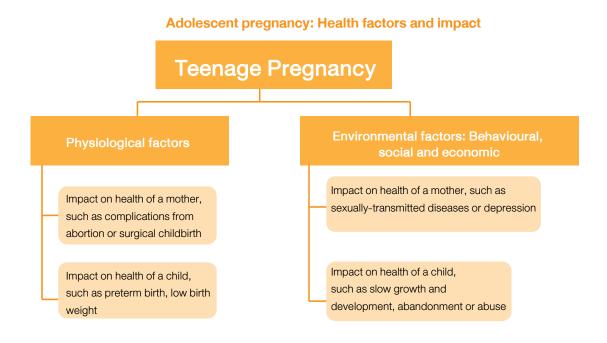
> Undertaker reveals the mystery behind over 2,000 infant corpses in Pai Ngern Monastery. Kom Chad Luek newspaper, November 20, 2010

Psychological impact

Millions of girls under the age of 19 get married worldwide every year, a figure driven up by certain beliefs, cultures and traditions, especially in patriarchal societies. It is estimated that about 90 percent of adolescents who give birth are married. This means that each year, millions of girls move from childhood to married life with adult responsibilities, with little time in between. In many cases, marriage is quickly followed by pregnancy. A girl's status changes from being a child under the care of her parents to being a wife, often under the authority of her husband. This perpetuates and reinforces a cycle of gender inequality, dependence and powerlessness.

In Thailand, child marriage is not as prevalent as in many other countries, and relatively few girls appear to have been forced into marriage or co-habitation, but the high number of adolescent pregnancies leads to stress and depression for the mothers, who are often not psychologically prepared for marriage, sex or pregnancy.

Where the pregnancy is the result of coerced or non-consensual sex, this is even more likely to be the case. In particular, a girl who has been forced to have sex may feel twice-stigmatised if she becomes pregnant. As a result, pressure may be brought on the girl to terminate the pregnancy, even if the abortion is illegal or unsafe. She may accept the risks to her health rather than face humiliation and shame.





135,342 female students between the grades of 7 to 12 quit school in the middle of the year from 2005-2009

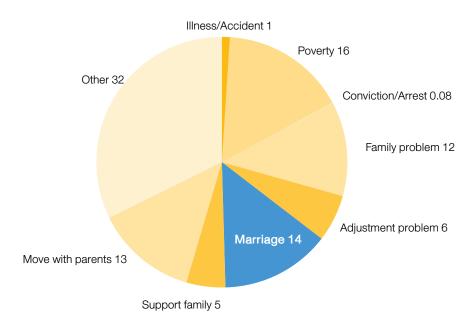
Impact on education

Pregnancy is a major reason why adolescents drop out of school or are forced to drop out, as they need to make a living for themselves – even though most continue to live with their parents or the husband's family. Thai society also frowns upon married or pregnant students. (Nicaise, Tonguthai et al 2000). Nevertheless, there are no accurate statistics as to the number of students who drop out of school for this reason.

According to the Office of the Basic Education Commission (OBEC) under the Ministry of Education, there were 135,342 female students between the grades of 7 to 12 who guit school in the middle of the year from 2005-2009, with marriage stated as the reason for doing so in 19,178, or 14 percent, of the cases. Marriage was cited as the reason for quitting school by 3 percent, 6 percent, 8 percent, 6 percent, 10 percent and 11 percent of all male and female dropouts in the 7th, 8th, 9th, 10th, 11th and 12th grades respectively.

Though data shows that 14 percent of girls leave school because of "marriage" (see graph below), it is not clear what percentage of adolescents drop out of school because they get married. It also does not tell us how many drop out because they are pregnant. Neither does the information cover students at private, vocational and other types of schools. Although there is no law against pregnant students attending school, adolescent pregnancy tends to taint the family reputation and cause shame as it goes against social norms. Parents usually do not want their child in school while she is pregnant, so many end up dropping out. (Suwansuntorn and Laeheem 2012; The Senate Standing Committee on Public Health 2011)

Reasons for quitting school given by 7th to 12th grade female students in schools governed by the Basic Education Commission in 2005–2009 (percentages)



Source: Office of the Basic Education Commission under the Ministry of Education

Impact on family and occupation

To save face, parents often pressure pregnant adolescents to get married, in addition to having her quit school (Suwansuntorn and Laeheem 2012). It is found that adolescent couples tend to face problems in their daily lives and child rearing because they are not physically and mentally ready to cope. They usually lack maturity, experience, freedom of choice and a good job. They earn little income because of low education, which leads to financial problems. If they move in with parents, they may eventually become a burden on them. A teenage child falling pregnant is often a cause for shame and depression in parents. When the parent of an adolescent mother refuses to help, or the father of the child neglects her, the chances of her suffering stress and violence increase. If the young mother moves in with the family of her partner where her in-laws blame her for the pregnancy, the psychological impact on the girl will likely be even more destructive. If her partner is of similar age, he is probably still a student with no or insufficient income to cover living expenses, which will cause financial problems in the family as the couple become a burden to both sets of parents (Somkid Somsri, Bunnarat Kengkasikij et al 2011).

Impact on the economy

Adolescent pregnancy in Thailand has emerged as a serious problem. The number of teenagers getting pregnant has almost doubled over the past 10 years. Nevertheless, there is as yet no study in Thailand which reflects the economic impact of adolescent pregnancy.

The adolescent pregnancy rate in Thailand is the fifth-highest in ASEAN, after Laos, Indonesia, the Philippines and Cambodia. The Thai rate is almost eight times higher than Singapore's (UNFPA 2013, appendix). The current high number of adolescent pregnancies in Thailand will likely affect its economic competitiveness, particularly as the country also faces a falling birth rate rate and an ageing population.

A 2013 UNFPA State of World Population report on adolescent pregnancy cites a World Bank report which states that girls given bargaining power to delay pregnancy see increases in their social bargaining power, opportunity for higher education, economic bargaining power, and job and higher-income opportunities. Thus, investing resources to empower girls is beneficial to the economy. Conversely, the costs of not investing in girls' empowerment are high.

The "lifetime opportunity cost" related to adolescent pregnancy can lead to serious economic impact. The opportunity cost is a measure of "what could have been" if only the additional investment had been made in girls. For instance, if a girl can postpone her pregnancy until she is ready, she will be able to spend more time in education and thereby enhance her future opportunities, productivity and income, which will in turn benefit the country and increase national income.

The World Bank report gives examples of opportunity cost resulting from adolescent pregnancy and quitting school, saying that if all 1.6 million adolescent girls in Kenya completed secondary school and if the 220,098 adolescent mothers there were employed instead of having become pregnant, \$3.4 billion could have been added to Kenya's gross income every year. This is equivalent to the money generated by the entire Kenyan construction sector. Similarly, Brazil would have added productivity worth more than \$3.5 billion if adolescent girls delayed pregnancy until their early 20s, while India's productivity would be \$7.7 billion higher.

The World Bank study adds that the analysis underestimates the true cost of not investing in girls. The costs computed are only economic, and do not include the social costs. It also emphasises that the study looks only at lost productivity in the labour market and thus does not estimate costs incurred to women's health, the possible implications for the child's future productivity (studies show that children of adolescent mothers gain lower grades at school), and the financial burden to others of unwed adolescent mothers.

The true costs – lower health status of the children of adolescents, lower life expectancy, lack of skills among pregnant dropouts, lack of social empowerment, and so forth - would increase the cost estimates many times over (Cunningham et al 2008).

As the number of pregnant adolescents rises, the economic cost will take a greater toll on communities and the country. The costs include those for treating teens for complications caused by unsafe terminations, as well as other health conditions related to adolescent pregnancy or childbirth such as low birth weight and child development.

But the cost is not limited to complications caused by terminations and neither is it confined to developing countries. In the United States, a developed country, it was found that the high rate of adolescent pregnancy and childbirth cost taxpayers almost \$11 billion in 2008. That figure went to pay for health care and rearing of children born to adolescent mothers (National Campaign to Prevent Teen and Unplanned Pregnancy 2011).

The economic effects of adolescent pregnancy can be divided into 2 major categories (Hoffman 2006). The first category encompasses the effects on the pregnant adolescents and fathers, such as the opportunity cost from the lower amount of taxes the adolescent parents would be able contribute through their entire lives, and the cost of social welfare provided to them by the government. The second category encompasses effects on the children born to adolescent mothers, ie the costs of health treatment, social services and special education, and the cost of measures to deal with social problems when they grow up, such as law enforcement.

The opportunity cost resulting from the lower amount of taxes paid is based on significant evidence that the adolescent pregnancy leads to fewer educational opportunities, career choices and lower income for parents. A lower education level for the mother or father means less educational opportunities for the child as well (Denise and Pol 1982). The table below is from a study in the United States which calculates the average number of years spent in the education system by mothers in different age ranges and the number of years of education they missed. It found that mothers who got pregnant at age 24 or above lost no educational opportunities.

Estimate of the number of years of education missed by pregnant mothers of different ages in the United States

Age when mother gets pregnant	Average no. of years spent in the education system	No. of years of education missed by pregnant mothers
15 or lower	8.9	4.0
16-17	10.5	2.4
18	11.3	1.6
19-20	11.9	1.0
21-23	12.7	0.2
24 or higher	13.5	0.6

Source: Dillard and Pol 1982

In addition, some studies take into account the intergenerational impact of adolescent pregnancy. For example, based on available evidence, daughters born to adolescent mothers aged 17 or under have as much as a 30 percent chance of getting pregnant and becoming adolescent mothers themselves. Daughters of mothers aged 18-19 have a 17 percent chance of becoming adolescent mothers, and that figure drops to 11 percent in the case of daughters born to mothers aged 20 and above (Denise and Pol 1982; Corcoran 1998).

Moreover, a study in the United States finds that the sons of mothers aged 17 or under have a 2.2 times higher chance of committing a crime and being sentenced to jail than those born to mothers aged 20 or above. Their contribution in taxes is also diminished for their whole lives.



There are relatively few studies on the cost of adolescent pregnancy at a national level. What studies there are come from the United States, where the rate of adolescent pregnancy is the highest among developed countries. Those studies indicate that the 760,000 cases of adolescent pregnancy and the resulting 420,000 births cost the federal, state and local governments over US\$9.1 billion in total in 2004, or \$1,430 for each baby born to an adolescent mother (Hoffman 2006). The figure increased to \$11.1 billion in 2006. The same study also states that the social cost of pregnancy and childbirth where the mother is under 17 is much higher than where the mother is 18-19 years old. Specifically, the average economic impact of childbirth by a mother under the age of 17 is \$4,080 while the figure is \$104 if the mother is 18-19 (Hoffman 2006).

Beyond the United States, only one report on adolescent pregnancy's economic impact is found, and it comes from England. This report is confined to the cost of adolescent pregnancy on the national health service, which amounted to £69 million in 2008 (Frances 2008). The report also indicates that it would make economic sense to invest in preventing teenage pregnancy and solving the problems that arise therefrom. Specifically, it estimated that each £1 invested would yield a £4 return, which is consistent with a study in the United States that estimates \$2 billion spent on family planning centres could yield \$7 billion as a result of the prevention of pregnancy among teens not ready for motherhood.

However, the estimate of costs and economic losses in the American and English studies does not factor in the social costs of teenage pregnancy, which would likely push the figures up considerably. Thus, in order to gain an accurate estimate of the cost to Thailand of adolescent pregnancy, a study dealing with both the direct economic and wider social impacts is needed here.

Conclusion

Adolescent pregnancy affects every aspect of the mothers' lives, and also has an intergenerational impact on the children born to them. It takes a toll on society and the economy. It also inevitably places a burden on the public health system which, for the past 10 years or more, has focused on providing universal health care. Adolescent pregnancy is a challenge which requires cooperation from all parties. Measures should be taken to reduce its impact on teenagers, who should be given the maximum chance to develop their potential through education, increase their opportunity in the job market and start a family when they are ready to become parents. Adolescent pregnancy also presents an unnecessary drain on social services and health systems, and leads to economic impacts at a national level.



Chapter 6

Measures for the prevention of adolescent pregnancy

In recent years, the public and private sectors have realised the need to address the growing trend of adolescent pregnancy. Key agencies have set in place policies to prevent and solve the problem, but they still lack an integrated approach, which has created redundancies and gaps in the process. The databases used by agencies to monitor the situation have yet to be integrated. As a result, there are no key indicators covering teenage pregnancy, no clear method for measurement and a lack of universal standards for sources of information. In addition, common goals and targets have not been set for all agencies, especially in terms of finding ways to cut teenage pregnancy rates, time frames for goals, how to achieve them, monitoring and evaluating the results, mechanisms to be used to coordinate between agencies on both the national and provincial level, and how to ensure the law is effectively enforced.

Consequently, the National Health Assembly's consensus to help solve the problem of unplanned pregnancy among teenagers in 2010, despite getting approval from the Council of Ministers, was not effectively executed because the involved agencies did not feel a sufficient sense of responsibility as stakeholders in the initiative (Sitaporn Youngkong and group, 2013).

There have also been pilot programmes to tackle teenage pregnancy launched by public and private sectors, as well as research projects set up by scholars in educational institutions to improve methods and guidelines. However, it is still not clear how the results from these programmes can be effectively incorporated into the daily operation of agencies once they are completed.

This chapter will propose effective preventive measures and solutions for the problem of teenage pregnancy.

Sex education classes in schools

The Ministry of Education and private developmental agencies have been collaborating to develop a comprehensive sex education curriculum and teaching methods since 2003. One of their aims is to foster wider acceptance of sex education. However, only some schools are participating, and these provide irregular lessons that only focus on sexual behaviour and safe sex, without covering key reproductive health issues such as sexually transmitted diseases, preparing girls for menstruation and developing an appropriate attitude toward sex. As a result, sex education is not as effective as it should be (Thaweesit and Boonmonkon 2009).

Though there are an increasing number of channels through which sex-related information is disseminated, teenagers who have completed their education and joined the workforce often end up getting overlooked, as do adolescents in special circumstances such as orphans and those who are HIV/AIDS positive.

Working teenagers may only receive partial information from the Aids Prevention Programme on reproductive health, prevention of drug-related problems and on sex trafficking and protecting themselves from sexual crimes. Comprehensive information on family-planning services is not easily available to this group.



A study by Vuttanont et al (2006) revealed that sex education curricula and teaching methods in Thailand varied drastically. Most emphasised biological aspects such as changes in the body and differences between males and females, rather than practical knowledge such as how to wear a condom and implement correct birth-control measures. Sex education also rarely includes lessons on controlling one's emotions, awareness of feelings, loving behaviour, relationships, and most importantly, negotiation skills. Teaching materials failed to cover knowledge and skills useful in real-life situations. Although public health personnel may support sex education, they rarely contributed to its delivery in schools. Very few people from the public health sector had actually worked with schools or provided them with advice.

Meanwhile, some teachers feel uncomfortable teaching about sex and so alter or omit topics. Teachers may have their own private reasons for this action, such as the belief that talking about sex is immoral, or that lessons on sex will only encourage the students to engage in the activity sooner, or it may reflect the teacher's own lack of the understanding of reproductive health.

A 3-month trial study under the Youth-led Educational Programme in Primary Schools in the Northern provinces of Thailand (Fongkaew Settheekul et al 2011) found that though students were taught and encouraged to take a positive attitude to sexual and reproductive health, including condom use, their attitudes to risky sexual behaviours, concerns about having sex, safe sex and ability to refuse sex did not improve.

Along with gaps in sex education and reproductive health services, there are failures in providing pregnant students with the opportunity to continue their school education. Though it is Ministry of Education policy to allow students to return to school or to study at home with councillors' support up to final-year examinations, no concrete measures govern this policy. Hence, it is implemented in different ways (National Public Health Commission, Senate 2011). The final decision on a pregnant girl's future is often left up to school administrators, teachers and parent associations, resulting in a myriad different ways of dealing with the situation. (Population and Social Research Institution, Mahidol University, 2011).

"The focus at school is on prevention, because teenage pregnancy is a big problem. That is why we teach sex education in schools. Sex education is not a new subject, and we realised its importance a long time ago. It is part of the Health and Physical Education curriculum at every level, from 1st grade to 12th grade. In addition to the curricula, there are student development activities and counselling to develop personal skills. Sex education exists not because it is important, but because it is a solution. At one point, it was part of the solution to AIDS, and now it is for teenage pregnancy. When we first included sex education, we did not know how to teach it. There was a period when we invested a great deal to train teachers to teach sex education comfortably... Understandably, it can be a little uncomfortable between young male teachers and female students. We hold many activities, but these things were not taught in teacher-training colleges. I think we lack the connection here. While training, teachers need to be taught methods of monitoring and helping students, how to get to know each child personally, to know how to solve problems by teaching students life skills, how to give lessons on sex education, and how to utilise basic psychology to solve students' problems."

> Saipan Sripongpankul Office of the Basic Education Commission, Ministry of Education

Nowadays, there are many progressive schools catering to children with different time schedules or different mental capacity that utilise a variety of educational methods. Typical of these special schools, which exist in many provinces, is Nong Chum Sang Wittaya School in Phetchaburi, which allows pregnant students to stay on and continue studying. In contrast, few ordinary schools allow pregnant teenagers to continue their education, with the decision often entirely up to the school administrator's policy. This discriminatory practice usually results in pregnant adolescents having to go to a school far away from their community.

"A weakness of schools and Thai society lies in their use of the term "sex education", which has led to objections from teachers and parents. In fact, the subject should be renamed "family education", in which both parents and children can be taught about parenting. In contrast, "sex education" involves topics such as how to wear condoms and taking birth-control pills, which leads to objections. Sexuality and pregnancy are a natural phenomenon, but schools act as if getting pregnant is equivalent to drug abuse. The schools do not care about the students' lives or the infants, the fathers, and their family members – who have to face all the misery with no recourse."

> Mitre Sriskulthai, Teacher Director of Nong Chum Sang Wittaya, Phetchaburi

Leaving the decision of what to teach young people about sexuality up to individual school administrators is a key reason for the patchy, uneven knowledge some young people have across Thailand. Despite the existing legislation and policy framework, many young people are still not able to enjoy their right to education and self-betterment. In response to these issues, this year, the Public Health Ministry and Education Ministry along with private institutions will push for schools to include comprehensive lessons on sexual behaviour in an integrated push by all involved agencies.

Stop violence, coercion and sexual harassment

Another key driver of teenage pregnancy is sexual harassment and violence. Some adolescent girls are coerced or forced into sexual relations. Some have been forced into marriage without having reached the legal age of 17. Hence, there must be a focus on adopting measures to prevent violence and sexual harassment against young girls.

While plenty of attention has been given to the problems of pregnancy and childbirth among Thai teenagers, there has been comparatively little discussion of how to keep adolescents in education, stop them from getting married before the age of 18, teach them to negotiate and communicate about sex and to avoid becoming victims of sexual harassment. These subjects should be taught as part of sex education in order to empower young girls with better communication skills, a sense of equality with men, and the skills to avoid being taken advantage of by men. It is found that violence in married life decreases if women are empowered and gain economic leverage, and emphasis is placed on their sexual and reproductive health as well as on involving men and boys in prevention and solutions (UNFPA State of World Population, 2013).

Condom usage and birth control for teenagers

It was found that half of the teenagers who used condoms during their first sexual intercourse use condoms less often later. Similarly, teenage girls do not have easy access to semi-permanent birth control because it is expensive and not covered by the universal health care system.

Solving these problems requires cooperation from many sectors and must include educating teenagers and providing them with contraception and prevention services. Yet, the idea of selling condoms openly or providing them freely at school is widely opposed, while teenagers are also often too embarrassed to buy condoms from convenience stores. Some cannot afford them, while some also choose not to use condoms handed out free because they are worried about the quality. Though some schools have been willing to install condom dispensers, they prefer not to publicise this due to fear of criticism.

Apart from providing teenagers with birth-control options, public service providers should also be more user-friendly towards teenagers who use their services, seeing them as smart youngsters who want to learn how to prevent problems.



"In 2011, we began providing 100 percent, 24-hour condom dispensers at the Ban Lad Hospital. The machines were installed in 2 places, in front of the Teen Clinic and the OPD. We've done this for the past 2 years, and the condoms were gone every night. Sometimes they came in a group. Each month, we provided around 1,000 to 2,000 free condoms depending on the frequency of social events. The 52-millimetre turned out to be the most popular size. We had to convince officials that it was good that the condoms were all taken, because they were being put to use. At least it prevented 3 things: no new AIDS patients, no teen pregnancy and no sexually transmitted diseases. It is a great prevention method. The free condoms programme is worth it. The system has never encountered any problems and there are a lot of supporters. Several groups, including homosexual men, came to get condoms from the dispenser, because they knew they would get them. When they are gone, they are gone. But if someone really needs them, we have extras in the Emergency Room. We usually put about 2 dozen of them in the cabinet, and they were gone every day."

> Ladawal Ruangaram Registered Nurse, Banlad Hospital, Banlad, Phetchaburi

Friendly reproductive health services

Some studies (Anusornteerakul et al 2008, Tangmunkongvorakul, Ruangyuttikarn et al 2006) reflect the limitations of reproductive health services: they are expensive, there are long-waiting periods, service hours do not suit everybody, there is a short window during which the services are available, they are not comprehensive, offer no activities to relieve stress, lack privacy and the staff are unfriendly, with negative attitudes toward sexually active teenagers. There are also other obstacles, such as administrators not providing the necessary support, officials who lack sensitivity over clients' reluctance to disclose their sexual history, teenage girls feeling uncomfortable with male staff, a lack of clear guidelines on how birth control is provided, taking too long to process personal information, an inefficient information transfer system, inefficient coordination between departments at the hospital and between hospitals and programmes that service difficult-to-reach groups.

On pregnancy termination, although some pressure was applied to the Medical Council of Thailand in 2005 over medical principles governing the practice, and for solutions to other reproductive health problems, it was criticised for its failure to decrease unsafe abortions, especially for unplanned pregnancies. Many women continue to suffer illegal abortions due to limited access to proper medical services, which in turn leaves them facing the risk of dangerous complications (Nattaya Boonpakdee, 2008).

"The staff should be friendly. They have to understand how to approach teenagers, because members of staff who see adolescent pregnancy as a horrible, repulsive or boring thing, or have a bad attitude towards teenagers, will act as obstacles. It will also stop teenagers from approaching us because they will feel condemned and shamed for being pregnant. As a doctor, I feel that medical staff must understand how to reach teenagers."

Jiraporn Prasertwit, M.D., Teen Clinic, Ramathibodi Hospital

National campaign policy

Turning teenage pregnancy into a national issue of concern might go a long way towards resolving the problem. Thailand still does not have such a national campaign covering the issue, which is a clear reflection of a lack of leadership. It remains unclear which agency should be in charge of publicly promoting prevention and solutions to teenage pregnancy and setting an agenda for best results.

So far, several agencies have backed campaigns promoting safe sex and the prevention of teenage pregnancies such as "Proud to Carry a Condom" and "Stop Teen Mom", which were launched by the Ministry of Social Development and Human Security. However, explicit campaigns such as "Stop Teen Mom", in which the facial expressions of teenagers giving birth were shown, gave rise to heated discussion between those in support of the message and those shocked by it.

Images from campaigns and activities concerning teenage pregnancy



"A comprehensive service development would provide public health services as well as social services, such as information on access to birth control and support services... Every agency has its own policy and acts independently, because the budgets are not centralised and are usually distributed locally. Therefore, each sector has to have its own policies. For example, the Ministry of Public Health's reproductive health development policies and strategies need to first be approved by the Council of Ministers. Though the Public Health Ministry's policy mentions that the ministries of Social Development and Human Security and Education, along with other agencies, require improvement and implementation, these ministries cannot be forced to comply. It is up to other agencies to decide how to implement the policy."

Kittipong Saejeng, M.D.

Director of the Bureau of Reproductive Health, Ministry of Public Health

Integration of comprehensive problem prevention and rectification

The Ministry of Public Health's reproductive health development strategy for 2010-2014 contains 6 strategies to be evaluated at the end of 2014, when the 2nd draft of strategies will also be considered. The expected results are that all provinces will have a council to handle unplanned pregnancies, and provincial strategic action plans to address teenage pregnancy problems.

The Department of Health has set standards for the care of pregnant teenagers, pregnancy termination, defined the circumstances for legal termination and developed service standards that are teen-friendly backed up by teen clinics in every hospital to provide information on prevention and problem-solving services.

Responsibility for the care of pregnant teenagers is not limited to schools and health care services; the Office of the Secretariat to the National Child Protection Committee also plays an important role. A 2013 manual of strategies to prevent and solve the problem of adolescent pregnancy published by the Ministry of Social Development and Human Security pointed out there was a larger number of very young teenagers who faced unplanned pregnancies and were not mature enough to handle their situation. Under the Child Protection Act 2003, the ministry appointed a committee to oversee prevention and solution of adolescent pregnancy problems consistent with measures to protect the rights of the teenagers. The committee was also handed the task of

helping lessen negative impacts of pregnancy on young mothers, their families and communities, along with bringing an end to the cycle of degradation in their lives through violation of rights, poverty and inequality. It works according to the following guidelines:

- Children and teenagers should have the knowledge and skills to handle sexual situations to avoid unplanned pregnancy.
- Pregnant adolescents should receive help, healing and life skills to avoid repeated pregnancy, as well as the skills to live a normal life via such measures as advocating the responsibility of the fathers, providing the opportunity to continue going to school or to attend alternative education or vocational training where that is not possible.
- Teenage mothers should be offered help in caring for their child. In cases where the mother cannot care for the child, the support family should step in.
- The teenager's family, community and wider society should be encouraged to learn, understand and take part in the prevention of teenage pregnancy and help for young mothers.
- Mechanisms should be put in place at national, provincial and community levels, including provision of pregnancy test services, advice on how pregnant teenagers can communicate with their family and the father's family, and treatment to alleviate the stress of the situation. In addition, there should be measures to assist adolescents during pregnancy, including provision of regular prenatal check-ups, diet counselling, instruction on parenting skills, temporary shelters and advice for young mothers on coping with a lack of financial support from their parents. Postnatal care and vaccination for children should also be available.

Mechanisms should be in place and operating in line with the Child Protection Act, along with staff at provincial and local levels dedicated to helping pregnant teenagers.

A network of staff should be developed to tackle the prevention and problem of teenage pregnancy through measures such as instilling a sense of responsibility among fathers for the care of their partners and children, and taking rigorous legal action against those suspected of sex offences against teenage girls. It should also encourage pregnant teenagers' parents to support and guide their children. In addition, strategies to eliminate sensationalised media coverage of the issue and to support socially responsible media content should be enacted.

There is also a body of research on the development of reproductive health programmes and teenage pregnancy prevention by utilising a variety of other measures, including the development of school-based models on pregnancy prevention for young teenagers (Chaikoolvatana, Powwattana et al 2013,) and integration of activities among existing community networks, (Siriporn Jirawatkul et al 2011) and the Mahidol model (see below). If these measures are to be used as a model to expand the services to more areas, further study needs to be done on their potential, and there needs to be long-term follow-up on the results.



Mahidol model

In response to the alarming growth of teenage-pregnancy problems, the "Mahidol Model: Prevention and Solution for Teen Pregnancy Problem" was developed as a community-based pregnancy prevention project. This model was initiated with the establishment of the Teen Clinic by the Faculty of Medicine, Ramathibodi Hospital two years ago and has since expanded to cover schools.

"The establishment of teen clinics in schools provided the schools with a support and monitor system, as well as a screening system for children experiencing difficult situations such as poverty, low academic achievement, drug abuse, absence from school, etc. It offers a broad-ranging service that does not focus on any particular subject, so as to limit the emotional impact on the teenagers. These types of sexual problems needed to be screened by the school anyway."

Later, the clinics began specialising to cover specific groups of children, with Teen Mum Clinics, Game Addicts Clinics, Obese Children Clinics, and Clinics for Children with Academic Problems. The services are now more targeted towards individual groups. They also encourage exchanges of information between children and parents. The clinics are in the Rama and Siriraj hospitals, and have staff from 7 faculties of the university working together there in different dimensions.

"Caring for teen mothers is only the tip of the iceberg. This is not the only thing we do, because it is not the root of the problem. We start from primary prevention, which involves educating children who haven't had sex to wait until they are the appropriate age, which means no sex or postponing sex. We teach them life skills and to love themselves. If they have self-esteem, they will not do harmful things. However, there are some that do have self-esteem but lack necessary life skills. They do not know how to say no in pressured situations, so they just let it happen. They need life skills... to postpone having sex until they reached the appropriate age. As for the secondary group, which includes a large number of sexually active teenagers, we teach them about using safe sex to prevent pregnancy and HIV/AIDS infection. We need to teach them about condom usage and other forms of birth control. As for the tertiary group, which includes the pregnant teens, we need to teach them about how to have a quality pregnancy, to dissuade them from having an abortion, or persuade them to have an abortion under safe and correct procedures when there are indications of health risks, and to know that they will be taken care of if they continue their pregnancy. Some of them get pregnant at the age of 12. They are too young to take care of themselves, let alone their pregnancy."

In addition, the Mahidol model also provides its services free, as most teenage mothers are from poor backgrounds. The hospital offers free prenatal care, blood tests, postnatal care, home visits, vaccination for the child, diapers, milk and instruction on parenting skills. After the teenage mother has given birth, she receives free contraceptive implants not covered under the universal health care policy and worth about 2,500 THB.

The programme covers the community surrounding Mahidol University Salaya, drawing in the local community, community leaders, the Department of Non-Formal and Informal Education, the Local Administrative Organisation, the district chief officer, public health volunteers, the mayor, hospitals, police and schools within the area. Its operation is a truly integrated affair, involving all parties.

As for the educational aspect, the Mahidol model works with schools in the area to allow pregnant students to continue their education. If the student does not want to go to school, she can attend vocational training supported by the Provincial Administrative Organisation, the Local Administrative Organisation, the school and the Department of Non-Formal and Informal Education.

There will also be studies within the Salaya area to compare a group that receives services under the Mahidol model with a group that does not, measuring sexual activity, pregnancy rate, birth rate and repeated birth rate.

Prof. Suwanna Ruangkanchanaset, M.D., Vice-President of Mahidol University

Solving teenage pregnancy at the provincial level: Case study of Soon Pung Dai (support centre), Pathumthani Hospital

Pathumthani Hospital is one of five pilot hospitals in the programme for strengthening the pregnant teenager support system, whose staff comprise doctors and nurses from the Social Medicine Department and social workers. Attitude-adjustment and development training is undergone by the personnel involved, and public information fosters a wider understanding of the system, the steps involved, and the conditions for support transfer.

In this way, the programme is able to provide a comprehensive health service to pregnant teenagers in addition to the social security and legal support necessary in helping solve their problems and aiding their return to mainstream society. A highlight is the counselling services that help create mutual understanding between pregnant teens and their parents and enable them to handle the problems they face, as well as provide information about various practical options that help the teenagers make decisions and handle the consequences.

When pregnant teens arrive at the hospital, they are screened by an outpatient nurse to ascertain the stage of pregnancy and their readiness to become mothers. If it is found that the mother is not ready for the pregnancy, she is referred to the support centre. In the case of pregnancies resulting from sexual abuse, the care covers the prenatal stage, childbirth and family planning. If the teenager is not ready to take care of the child, the service will refer the child to Ministry of Social Development and Human Security agencies, which oversee care services in the province. If the teenager decides to terminate the pregnancy, staff will guide her through a safe and appropriate termination process, which covers public hospitals, private hospitals and private development agencies.

Nonetheless, the One Stop Crisis Centre (OSCC) Pathumthani Hospital meets with obstacles and problems in giving advice on teenage pregnancy. They include:

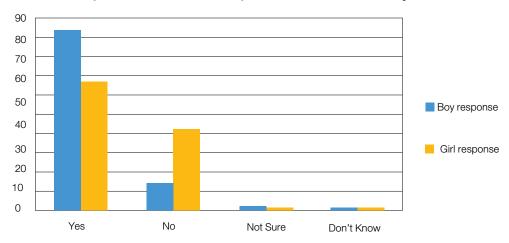
- Having the support centre as a special service in addition to the hospital's regular services adds to the responsibilities of staff. Counselling is a particular challenge as it takes time and requires specialist skills. As a result, the staff cannot provide a high quality of counselling.
- There are gaps in implementation of services due to insufficient human resources and budget for the prevention work, as well as a lack of facilities for pregnancy termination.
- There are limitations concerning management between the networks, as well as a lack of coordination between governmental agencies and private developmental agencies. Despite the strong network in the One Stop Crisis Centre, there are still uncoordinated operational systems such as the system to support and manage actual expenses.
- The regulations of the 3 National Health Security Funds do not facilitate the handling of teenage pregnancy problems, for instance the "Rabob Borikan Pathomphume Klai Ban Klai Jai" (Near Home and Near Heart Service System) does not offer birth-control services, teen pregnancy care, or efforts to put a stop to covert terminations. Consequently, the teenagers turn to hospitals outside the area for services, and the financial burden falls on them or their families.
- Law enforcement is not in step with the problem of adolescents who become pregnant through sexual abuse. For example, by law the offender must pay for any termination. But this often doesn't happen, either because the offender was not apprehended, the offender is in poverty or the offender is a close family member. A temporary solution is to set up a support fund among the network members, although that still may not be enough to handle the expenses.

Creating awareness and involvement among men

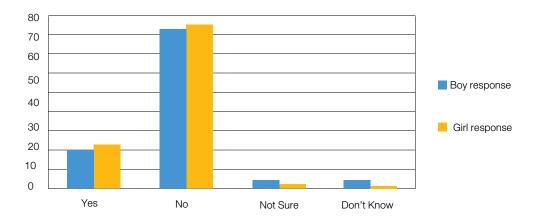
Questions often overlooked in efforts to prevent and resolve problems of pregnancy among teenagers include how to involve the fathers, and what are men's views and attitudes towards the issue. In Thai society, men are traditionally brought up to be the dominant members of the family. In recent years, rapidly changing social patterns have seen the average number of children in families fall, and girls enjoying better educational opportunities than in the past.

The 2006 National Sexual Behaviour Survey of Thailand reports that, according to young people, 71 percent of their fathers think it is acceptable for their sons to have premarital sex, while only 21 percent of fathers believe it is fine for their daughters to do so (see table below). Broken down by gender of respondent, the contrast is even more striking: 83 percent of sons say their father finds it acceptable for them to have sex before marriage – 20 percent more than daughters asked the same question. Boys and girls display views similar to their fathers' when it comes to premarital sex for girls.

Perception of fathers' acceptance of sexual activity of sons



Perception of fathers' acceptance of sexual activity of daughters



What is clear here is that boys and girls grow up with very different views of what their parents find acceptable in terms of sexual behaviour. While boys seem to think that being sexually active will not be frowned upon by their parents and authority figures, girls live under constant pressure to avoid the "shameful behaviour" of being sexually active. There is consequently much peer pressure on boys to "perform" sexually, which may translate into emotional, psychological and even physical pressure on girls to have sex.

Hence, it is important to reach out to boys to create positive attitudes towards sexual relationships, counter negative ones and prevent them from viewing women as merely sexual objects. Moreover, viewing relationships primarily in terms of sexual gratification does not lead to the fostering of partnerships respectful of the whole person and of girls' sexual decisions. The paradigm of male dominance and power in sexual negotiations has led to behavioural risks in men, such as

using violence to solve problems, not using condoms, and having unsafe sex. Giving men the opportunity to take part in moves aimed at creating more equality between men and women will result in a positive outcome for the next generation of both young girls and boys. Counselling for and reaching out to the teenage fathers of adolescent girls' children has been neglected, in part, because fathers often disappear when the girls are pregnant. There should be counselling for both partners as well as their families. It is important, through education, to create better general understanding of family planning and birth control. The boy and the girl involved should make the decision together to prevent a repeat pregnancy before they reach the age of 20 (UNFPA State of World Population, 2013).

Other forms of help and support

For pregnant teenagers who are not ready to care for their child, the Ministry of Social Development and Human Security has a set of measures aimed at reintegrating the mother in society by 1) counselling, 2) vocational training for those with no occupation, 3) offering to broker the relationship between teenage mothers and their family, 4) giving the teenagers 2,000-3,000 THB in financial aid, free milk and dietary supplements, as well as financial aid for the children's education as they grow up.

Some of the teenagers have to turn to emergency shelters, where stays are limited to 3 months. The initial goal is to get the teenagers back home. However, there are often complications, such as where teenagers have been sexually abused by family members. Hence, each issue must be resolved with the appropriate legal, social, physical and psychological measures.

A remit of the Ministry of Social Development and Human Security is to study specific case details to understand the problems and the needs of each pregnant teen, aided by social workers working in the local areas.

But with the ministry handling several other social problems, and facing management limitations, it has decided to introduce an application system for adolescent pregnancy services such as medical and prenatal care and accommodation in shelters.

In addition to this, a 5-year strategy coordinated by the provincial child-protection committees was launched in 2011 to offer education campaigns targeted towards pregnant adolescents. The central child-protection agency includes officials from 8 key ministries and related private agencies.

Under the Child Protection Act 2003, the provincial child-protection committees have 3 mechanisms, namely the National Child Protection Committee chaired by the Social Development and Human Security Minister, provincial level committees chaired by the respective provincial governor, and the Child Protection Committee in Bangkok.

The provincial committees serve as the main executive agencies and get funding from the Ministry of Social Development and Human Security. However, there are several different ministries working on teenage pregnancy-related problems, with the budget split between them. Hence, the Ministry of Social Development and Human Security must carefully distribute its funds based on the level of the problem in each area, setting a maximum budget of 60,000 THB per case per year.

A lack of proper funding is a major obstacle to effective action on teenage pregnancy. This situation could be improved if the Interior Ministry or other related government bodies contributed more funding. Efforts should also be made to avoid overlapping of projects, as in the case of the Social Development and Human Security Ministry, Education Ministry and Public Health Ministry all working on preventive strategies such as educating teachers and students. A more cooperative and integrated approach from the three ministries could yield greater efficiency.

Government responses to adolescent pregnancy

Involved agencies use the framework of the population plan to set up a 5-year strategy to handle the impact of changes in the population structure. Currently, the Office of National Economic and Social Development Board is working on a long-term (20-year) operational plan based on the population plan framework.

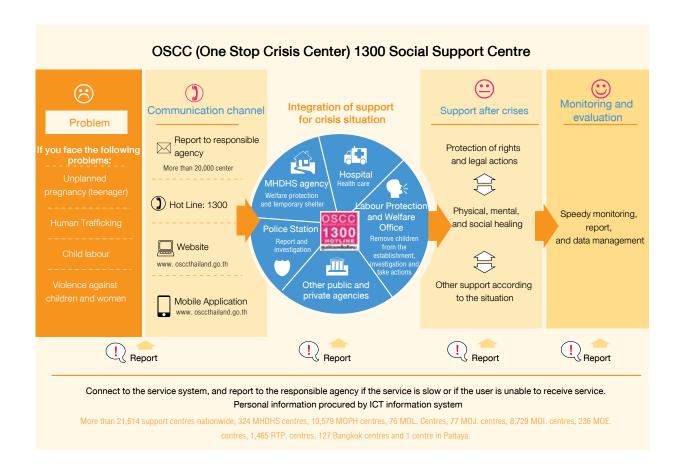
All involved parties have also been made responsible for the prevention and solution of the adolescent pregnancy problem.

The Ministry of Public Health is supporting integrated reproductive health strategies designed to bring together all agencies in each province, including government, private and civil agencies. As part of this effort, in 2012 a municipal-level policy entitled "Stepping toward Reproductive Health Municipal" focused on the prevention of teenage pregnancy problems via a holistic approach that drew in the community, families, schools and public health service facilities.

The ministry has set up new regulations under which public health providers must be friendlier toward teenagers, encourage them to use condoms and birth-control methods, provide health care for adolescent mothers' children and follow up on the status of pregnant teenagers and childbirths at the provincial and national level. It has also given public health officers the tools and knowledge to better handle the teen pregnancy issue.

Meanwhile, the Education Ministry has put in place comprehensive sex education in state schools, a student-support system for schools under the Office of the Basic Education Commission, as well as holding activities to advocate learning about unplanned pregnancy, such as using the "UP TO ME" media campaign in 2011. It is also working on teaching students in 242 pilot schools in 22 provinces how to protect themselves from unplanned pregnancy, risky sexual encounters, as well as where to go to find help when faced with situations that lead to unprotected sex and unplanned pregnancy. The Ministry of Education is also encouraging student leaders to organise activities to inform, create awareness, give advice and help, as well as share experiences and knowledge, related to unplanned pregnancy and sexually transmitted disease. The ministry plays the role of supervising, monitoring and evaluating the activities.

The Ministry of Social Development and Human Security launched its "Prevention and Solving of Children and Adolescent Unprepared Pregnancy Strategic Plan" in 2013, under which related public and private agencies set up provincial operational plans. The ministry's provincial offices coordinate and monitor the progress made in the resulting teenage pregnancy prevention programmes, tracking whether information is being properly provided to teenagers and if there are campaigns to change damaging attitudes towards sex. They also help local administrative organisations and communities set up action plans and launch operations to help prevent teenage pregnancies. One example is the Save the Teen campaign, with its tagline "No No... No Sex No Drugs No Violence", which invites all sections of society to help forge a new paradigm of "Preventing Thai Teenagers from 3 undesirable behaviours: sex, drugs and violence". In 2013, central government introduced a policy to solve the problem of adolescent pregnancy along with other problems such as human trafficking, child labour and violence toward children and women. It also launched the "One Stop Crisis Centre" (OSCC) programme in 2013 to coordinate the operations of all involved agencies.



Conclusion

Despite concerted efforts by different sectors to resolve the problem of teenage pregnancy and childbirth, obstacles such as the lack of integration between agencies, lack of connection in the operation and programme management levels as well as the lack of links between national and provincial policies make the programmes inefficient. The lack of national goals and strategies has resulted in operational gaps. For instance, many agencies have been working on getting schools to include sex education, but teenagers outside the education system who are at risk of becoming pregnant before turning 18 cannot access the relevant information and knowledge. One issue that must be resolved urgently is providing easy access to friendly family planning services, especially birth control options for both partners. This process should have all the agencies working together in harmony. Also, more attention needs to be paid to solving the problem of teenagers under the age of 15 getting pregnant. This problem is especially serious given the consequences, and should never occur.

Chapter 7

Charting the way forward

"The vision of the United Nations Population Fund establishes that it must advocate the protection of girl's rights to allow them to transition from teenagers to adults safely and with dignity, which means that they need to grow up in an environment that is without sexual prejudice, discrimination, violence and coercion. Teenage pregnancy leaves the girl with no choices. They lack the ability and opportunity to fulfil their potential. Girls need to be empowered, so they can be strong and able to defend their rights, especially the right to reproductive health."

(UNFPA State of World Population 2013)

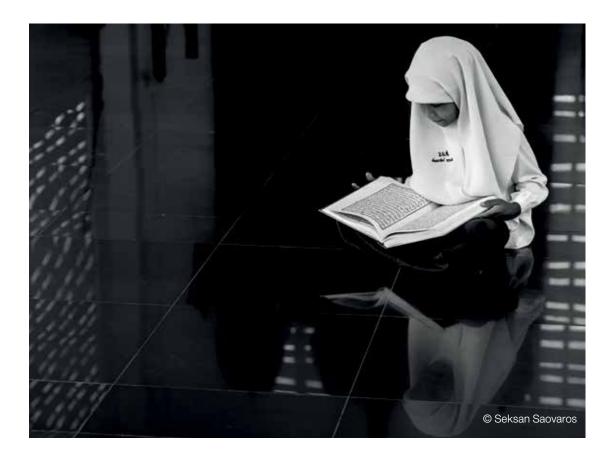
Though many agencies have tried to solve the problem of teenage pregnancy, the measures mostly focus on changing teenagers' behaviour without attacking the root causes, such as sexual inequality, unfair educational opportunities, and the protection of rights as per national laws and international obligations. They also fail to address the roles of parents, schools, community and society as well as people who have the authority to set policies, all of whom are responsible for these youths.

Suggestions on policies for specific cases

- Reach girls aged 10-14 years old. This age group is often overlooked by policymakers. Yet interventions at this critical stage of their development, characterised by profound physical, cognitive and social changes that occur in puberty, are needed to ensure girls' healthy transition into adulthood. Under Thai law, it is illegal for anyone to engage in sexual activity with a person under the age of 15. This means that guardians, parents, other family members, teachers and others are responsible, and should be held legally responsible, for girls under 15 who become pregnant. Of course, the best way of preventing pregnancy is by providing students with age-appropriate information and the skills to avoid unwanted sexual advances. It is a girl's right to be in school and not be pregnant, and it is the duty of those around her to make this happen. Data collection does not traditionally list this age group separately, so national censuses and household surveys should include a basic set of questions about girls aged 10 to 14. All the data should also be disaggregated to record the risk of school dropout, violence and coercion, as well as early pregnancy, so these girls and their families may be reached with appropriate input and intervention.
- Reduce repeat pregnancy and childbirth in women under the age of 20 by educating teenagers on reproductive health and use of birth control, as well as ensuring that sexually active teenagers have access to contraceptives in order to prevent pregnancy and HIV/AIDS infection. While all teenage girls and couples facing pregnancy and childbirth should receive friendly reproductive health services, and be provided with the correct knowledge about family planning and birth control. This is never more important than in the case of teenagers who have already given birth. It is important to let teenagers have access to semi-permanent birth control such as IUD and implants as part of their right to health security. Access to contraception and counselling services should also be increased to effectively prevent adolescent pregnancy. In addition, measures should be in accordance with the social and living environment of the teenage population. At the same time, progress needs to be clearly monitored and evaluated on such areas as the outcome and possibility of providing free contraception to teenagers at risk both inside and outside hospitals, while eliminating obstacles such as regulations concerning beneficial rights under the health security programme.

- Invest in education of all children, ensuring they receive quality education and security even if the students do not live with their parents. Girls living in dormitories must receive protection at all times. As for adolescents who are pregnant, it should be ensured that they are able to complete their education without discrimination and have financial support to take care of their child without having to quit school. The Ministry of Education and educational institutions must put in place measures to retain teenage girls in school for as long as possible, as well as reduce the number of dropouts so as to develop the potential of girls and teenagers with self-respect, knowledge and skills to be independent. This may also include proactive measures by school and other authorities to influence and reverse parents' and community leaders' decisions to pull pregnant girls out of school and stop them from returning after childbirth.
- Support access to comprehensive sexuality education for teenagers so they have the skills to evade situations leading to sexual coercion, can negotiate to avoid unsafe sex, know what should be done to prevent pregnancy and know what options are available if they do get pregnant. Ministries and agencies that are involved should develop a comprehensive curriculum that offers more than just biological information about sexual relationships. It should pay particular attention to human rights as a basis for comprehensive sex education: the right to education, the right to health, the right to protection and the right to live a life free of violence and discrimination.
- Support communication between parents and teenagers about sex by reducing the communication gap. Parents remain the most important persons in the lives of their children and they should be involved in helping with the transition from childhood and adolescence to adulthood in ways that are supportive rather than restrictive, while insisting on the need for responsibility in all relationships, including those of a sexual nature. Parents' attitudes do not appear to have caught up with the change in the lifestyle and environment of teenagers today, when society is more accepting of communication about sex. Therefore, it is necessary for parents to overcome the generation gap and address important issues such as how to avoid unwanted sexual relationships, instead of using strict rules to control teenagers' behaviour.
- Allow young people to become a part of the solution rather than part of the problem. Thailand is facing a youth bulge while simultaneously ageing quickly. Thailand needs to quickly adjust to new and evolving social norms that are being shaped by young people. Wishful thinking about social and "cultural" norms that have or are about to disappear from the lives of millions of young people will do little to stop the changes themselves. Today's young people will be tomorrow's lawmakers, norm setters and parents. Therefore, the norms they are jointly adopting today, no matter how difficult they are to accept by many in the older generations, will be the standards and norms of tomorrow. Though administrators, policymakers and officials working on the issue at hand may have the experience beneficial to formulating measures, their views might still be seen as remote from the reality of many young people's lives. Hence, they do not offer real solutions that are in step with the rapidly changing lifestyles of today's teenagers. Perhaps the most effective way of solving the problem of teenage pregnancy would be to engage young people as equal partners and have them acknowledge their rights and responsibilities.





- Strict law enforcement to reduce the marriage of teenagers under the age of 18, as well as introducing new measures to battle sexual violation and coercion. Involved agencies must strictly enforce laws with cooperation from the local community and refuse to protect sexual offenders. Additional attention should also be given to strict enforcement of law in cases that directly lead to adolescent pregnancy, as well as to indirect causes such as violence against women, drinking and drug-taking among teenagers.
- Boost awareness among men and boys so they can play a part in solving the problem. In the past, measures to tackle the problem of adolescent pregnancy involved few men. However, it is necessary to involve young men, so they can learn how to foster sexual relations without violence, learn safe sex and learn how to be responsible in sexual relations with their partner.
- · Working comprehensively and on various levels. It is important to acknowledge that one size does not fit all - not even in the case of reducing teenage pregnancy. Successful interventions will include those aimed at delaying the start of sexual activity, as well as keeping young people safe when they have become sexually active, and ensuring that there is support when they experience pregnancy or sexually transmitted infections. They will also reach out to policymakers and opinion leaders, employers and the media as well parents, teachers, healthcare personnel and community leaders. Most importantly, to be successful, measures will require constancy over time, and consistency in message and tone, across all interventions and actors involved. Operations should be well connected between involved agencies on the central, provincial and local levels.

In order to follow the suggestions listed above, there needs to be cooperation between agencies, courage and sincerity in the operation, monitoring, as well as short- and long-term evaluation.

Proposals for operational integration

- · Establish an integration mechanism between public, private and community agencies to solve adolescent pregnancy problems by setting up national and provincial plans that are independent and in accordance with the national goal for all agencies. Moreover, the prime minister should ensure that policies on teenage pregnancy prevention and rectification are being implemented, just like the national HIV/AIDS prevention plan, which will require cooperation from all relevant sectors.
- Push for parliamentary approval of the Reproductive Health Act, because it is an important tool to protect teenagers' right to health care services including the prevention of unplanned pregnancy, age-appropriate comprehensive sex education in every school, access to prenatal care, care during childbirth and postnatal care. They should also be granted access to family planning services, effective birth control and service providers who are friendly and approachable, which will indirectly lead to the prevention of pregnancy and HIV/AIDS infection. Careful consideration should also be given to safe and legal pregnancy termination in order to reduce risk, and provisions should be made for protection against sexual violation, child marriage that may have been approved by the parents, as well as the protection of the right to education.
- There should be an efficient allocation of sufficient funds and manpower to handle problems that require a connection between central, provincial and local agencies.
- The integration of all responsible agencies place importance on using factual evidence and data to set policies, operate, monitor and evaluate by investing to improve the evaluation system to prevent and resolve teenage pregnancy problems. Moreover, the information and evidence should be made available so that the decision makers can use them when setting up measures and policies. Knowledge management should also be systematic, so lessons and experiences in one place can be applied to the management and activities in other areas.

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Appendix

Table 1: Delivery rate of 15-19 year-old adolescent girls (per 1,000) in 2000-2012

Table 1: Deliv	very ra	ite of 1	5-19 ye	ear-old	adoles	scent g	irls (pe	r 1,000) in 200	00-201	2		No. of childbirth	No. of	
						Delivery r	rate: 1000						given by women aged 15-19	women aged 15-19 years old	Delivery ratio: 1000
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Krabi	42	47	44	42	54	62	57	62	61	63	62	65	1,151	17,673	65.1
Bangkok	35	35	47	53	60	61	59	56	54	52	49	50	10,265	208,525	49.2
Kanchanaburi	37	41	46	47	63	64	65	66	65	63	63	68	1,970	30,497	64.6
Kalasin	26	29	35	37	38	41	40	44	44	43	45	47	1,805	36,704	49.2
Kampaheng Phet	29	32	37	41	49	54	51	56	53	54	52	58	1,500	26,493	56.6
Khon Kaen	30	32	36	36	44	44	43	46	45	48	49	53	3,616	66,931	54.0
Chanthaburi	40	47	50	50	60	61	62	60	61	61	59	67	1,264	19,278	65.6
Chachoengsao	34	40	40	42	56	61	61	67	63	62	61	62	1,619	24,722	65.5
Chon Buri	58	60	70	69	87	90	88	88	85	79	78	82	4,156	48,828	85.1
Chainat	20	24	32	31	43	45	54	54	57	55	58	56	594	10,695	55.5
Chaiyaphum	25	27	31	30	37	41	43	44	47	48	49	54	2,188	40,768	53.7
Chumphon	38	37	42	36	48	54	52	56	59	56	55	59	1,143	18,290	62.5
Chiang Rai	28	30	34	35	41	38	37	36	37	37	40	44	1,957	44,079	44.4
Chiang Mai	39	39	41	42	42	45	42	39	39	37	39	41	2,561	59,810	42.8
Trang	29	34	33	32	43	46	48	47	51	44	47	53	1,339	25,596	52.3
Trad	39	39	47	48	60	62	60	63	63	57	56	66	559	8,179	68.3
Tak	50	60	61	61	76	67	72	68	67	70	84	66	1,492	21,587	69.1
Nakhon Nayok	37	49	43	47	60	63	61	72	70	71	64	85	589	8,858	66.5
Nakhon Pathom	43	46	44	54	61	61	58	57	54	53	49	52	1,713	33,300	51.4
Nakhon Phanom	30	30	33	33	40	40	40	43	42	43	46	49	1,334	27,094	49.2
Nakhon Ratchsima	32	34	35	34	43	43	43	45	50	49	50	55	5,234	93,913	55.7
Nakhon Sri Thammarat	25	27	26	30	37	39	41	42	45	45	44	49	2,855	57,598	49.6
Nakhon Sawan	28	33	37	40	49	54	58	58	59	58	59	62	2,192	37,050	59.2
Nonthaburi	32	34	45	48	56	55	50	52	50	47	51	49	1,915	38,895	49.2
Narathiwat	36	41	34	35	39	41	42	43	45	45	44	45	1,601	34,350	46.6
Nan	25	29	27	24	33	30	33	31	32	32	30	36	659	17,404	37.9
Bueng Kan	-	-	-	-	-	-	-	-	-	-	-	53	1,070	15,503	69.0
Buri Ram	27	31	35	32	39	43	42	43	48	52	53	58	3,513	62,121	56.6
Pathum Thani	30	34	46	39	62	61	59	52	51	44	46	41	1,618	38,582	41.9
Prachuap Khiri Khan	35	45	53	56	70	72	76	74	75	75	72	79	1,447	18,226	79.4
Prachinburi	33	41	38	42	52	59	56	57	61	60	57	67	1,045	16,971	61.6
Pattani	30	36	36	36	36	40	37	41	40	42	38	42	1,209	31,459	38.4
Ayutthaya	28	34	41	46	63	67	63	67	66	63	59	58	1,622	27,175	59.7
Phayao	20	22	25	23	31	32	30	29	27	28	26	30	593	19,698	30.1
Phang Nga	33	38	34	38	52	56	56	57	58	56	50	64	629	9,370	67.1
Phatthalung Phiabit	21	23	22	25	29	37	38	41	43	44	39	42	830	19,174	43.3
Phichit	32	34	36	35	41	46	50	54	55	56	60	63	1,073	18,443	58.2
Phitsanulok	27	30	35	38	44	49	46	43	46	45	45	49	1,640	32,299	50.8
Phetchaburi	29	34	39	48	54	61	62	60	61	63	62	64	960	16,186	59.3
Phetchabun	23	24	29	31	40	39	41	44	43	44	44	50	1,757	34,820	50.5
Phrae	16	20	19	21	24	27	26	30	26	28	28	33	456	15,436	29.5
Phuket	42	45	63	64	64	70	65	68	64	65	62	65	875	14,322	61.1
Mahasarakham	21	24	28	31	31	33	32	33	37	37	35	38	1,481	36,227	40.9
Mukdahan	24	27	28	28	35	35	37	39	39	43	43	46	672	13,502	49.8
Mae Hong Son	55	58	53	50	67	64	61	51	53	52	58	60	648	10,751	60.3
Yasothon	27	27	32	28	34	35	35	38	41	41	41	45	932	19,850	47.0
Yala	40	41	39	39	49	49	48	49	48	49	46	51	1,227	23,540	52.1
Roi Et	21	23	25	26	33	32	32	33	35	35	36	41	2,199	49,934	44.0
Ranong	31	37	38	38	43	50	53	53	41	53	51	52	403	7,248	55.6
Rayong	46	56	67	67	81	93	88	87	86	85	79	82	1,900	23,720	80.1
Ratchaburi	38	44	49	48	63	63	64	65	62	63	61	66	1,994	30,181	66.1

Continue													No. of childbirth	No. of	
						Delivery I	rate: 1000						given by women aged 15-19	women aged 15-19 years old	Delivery ratio: 1000
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Lopburi	29	31	41	46	57	60	58	59	60	61	56	62	1,505	25,526	59.0
Lampang	19	20	21	22	26	29	27	27	27	27	28	29	781	25,480	30.7
Lamphun	24	30	28	29	30	33	33	32	31	31	31	34	423	13,033	32.5
Loei	23	27	34	37	45	47	45	47	49	50	51	56	1,280	22,333	57.3
Sisaket	29	30	27	26	30	34	33	37	38	41	42	46	2,672	57,960	46.1
Sakolnakhon	27	28	30	35	41	42	42	41	45	48	51	52	2,490	43,240	57.6
Songkhla	32	33	35	37	44	47	46	45	46	45	47	53	2,812	53,344	52.7
Satun	36	40	35	39	44	53	51	52	55	57	55	57	833	12,469	66.8
Samut Prakan	29	34	46	48	60	60	62	60	55	53	54	60	2,660	45,260	58.8
Samut Songkhram	26	27	37	38	50	49	48	47	47	44	48	56	328	6,248	52.5
Samut Sakhon	49	55	66	63	88	87	86	83	85	79	77	82	1,591	19,226	82.8
Sa Kaeo	32	31	36	35	44	49	51	52	56	53	56	60	1,211	20,827	58.1
Saraburi	34	42	51	51	74	70	68	68	67	69	65	72	1,566	22,896	68.4
Sing Buri	46	40	47	47	62	66	62	66	64	62	62	63	379	6,621	57.2
Sukhothai	21	24	32	32	40	44	48	48	47	50	51	54	987	19,775	49.9
Suphan Buri	34	37	39	44	55	61	61	59	59	62	61	64	1,796	29,278	61.3
Surat Thani	41	42	43	47	52	57	57	66	62	63	56	63	2,413	38,596	62.5
Surin	27	28	27	26	32	33	33	36	38	41	45	48	2,764	54,929	50.3
Nong Khai	28	28	36	36	40	42	42	44	45	45	46	42	961	19,828	48.5
Nong Bua Lam Phu	25	33	40	39	40	46	45	47	48	50	48	54	1,092	19,751	55.3
Ang Thong	32	41	40	42	59	65	57	65	60	62	60	61	594	9,600	61.9
Amnat Charoen	25	29	32	23	30	32	33	36	38	36	40	43	606	14,741	41.1
Udon Thani	33	32	42	44	48	47	47	47	48	49	50	56	3,369	60,714	55.5
Uttaradit	21	24	32	29	36	38	39	40	38	40	44	47	711	15,047	47.3
Uthai Thani	34	34	35	43	46	52	55	63	59	61	61	68	698	11,233	62.1
Ubon Ratchathani	30	31	36	33	41	41	41	43	45	49	49	53	3,865	74,342	52.0
nationwide*	31	34	38	39	47	49	49	50	50	50	50	54	129,451	2,404,152	53.8

Source: Bureau of Policy and Strategy, Ministry of Public Health

Table 2: Ratio of 10-17 year-old adolescent mothers per 1,000 adolescents in the same age group

Ratio:1000 Ratio:1	Province 1-77	2000	2001	2002	2003	2004	2005	2006	Repeat Birth Ratio: 1000	io: 1000 2008	2009	2010	2011			2012 No. of
Mathematical Process Mathematical Process	Province 1-77	Ratio:1000	Ratio:1000	Ratio:1000	Ra	Ratio:1000	tio:1000 Ratio:1000		Ratio:1000							
thuni 27.4 15.9 18.3 20.4 23.0 23.0 22.0 21.1 20.4 21.1 20.4 21.1 20.4 21.1 20.4 22.8 16.2 16.2 18.5 18.6 24.7 25.3 26.0 26.1 26.1 26.1 26.1 26.1 26.1 26.1 26.1	rabi	24.1	17.6	17.2	16.3	21.1	24.3	22.4	24.6	24.3	24.6		24.3	24.3 25.7		25.7 722
bburi 228 162 185 185 247 253 260 261 261 261 261 197 117 117 138 143 143 147 253 260 261 261 261 197 197 197 197 197 197 197 197 197 19	Bangkok	27.4	15.9	18.3	20.4	23.0	23.0	22.0	21.1	20.4	20.2		19.7		21.0 6	21.0 6,462
Phell 17.7 11.7 13.8 14.3 14.7 15.7 15.4 16.9 17.5 Phell 16.8 12.0 14.7 15.9 15.0 15.0 16.0 17.5 16.8 12.0 14.7 13.9 17.0 16.8 19.5 21.4 20.6 16.8 12.0 14.7 13.9 17.0 16.8 20.9 21.4 20.6 16.9 20.4 20.0 19.4 23.7 23.4 24.5 23.7 24.3 20.6 20.5 15.9 15.5 21.8 23.4 23.5 25.9 24.4 20.6 13.1 26.7 27.9 27.0 33.5 34.4 33.7 33.6 33.0 21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 22.1 18.4 12.4 13.3 13.6 15.2 15.5 11.3 14.5 15.2 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 17.7 17.5 13.8 23.2 24.7 23.9 22.5 23.1 14.9 17.7 17.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 10mm 17.7 17.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 10mm 17.7 17.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 10mm 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 23.1 14.9 13.1 13.5 16.4 16.7 16.2 17.3 19.2 23.1 14.9 13.1 13.5 16.4 16.7 16.2 17.3 19.2 24.1 15.2 13.2 13.3 15.0 15.1 15.9 16.5 17.7 24.1 15.2 13.2 13.3 15.0 15.1 15.9 16.5 17.7 25.1 16.1 13.0 13.5 15.5 15.9 16.5 17.2 26.1 17.8 13.9 13.5 15.5 15.9 15.5 15.8 27.1 18.0 13.1 13.5 15.5 15.9 15.5 15.8 28.1 16.1 13.0 13.5 15.5 15.9 15.5 15.8 28.2 13.1 13.5 15.5 15.5 15.5 15.5 15.5 28.3 13.1 13.5 15.5 15.5 15.5 15.5 15.5 28.4 13.1 13.5 13.5 15.5 15.5 15.5 15.5 28.5 13.1 13.5 15.5 15.5 15.5 15.5 28.6 13.1 13.5 15.5 15.5 15.5 15.5 28.7 13.1 13.5 15.5 15.5 15.5 28.8 29.5 20	Kanchanaburi	22.8	16.2	18.5	18.6	24.7	25.3	26.0	26.1	26.1	25.7		25.4		28.3	28.3 1,254
phet 16.8 12.0 14.7 15.9 18.8 20.9 19.5 21.4 20.6 saao 20.2 20.4 20.0 19.4 21.9 17.0 18.8 20.9 19.5 21.4 17.5 saao 20.6 15.9 15.9 16.5 21.8 23.4 24.5 23.7 24.3 saao 20.6 15.9 15.9 16.5 21.8 23.4 24.5 23.7 24.3 13.1 26.7 27.9 27.0 33.5 34.4 33.7 33.6 33.0 16.1 10.7 12.2 11.3 15.9 15.5 14.3 33.0 22.5 18.4 10.4 10.3 13.8 15.2 15.5 14.3 14.5 15.2 25.1 16.3 17.2 13.3 13.6 15.2 15.5 14.3 14.5 15.2 25.1 16.3 12.4 13.3 15.6 16.9 1	Kalasin	17.7	11.7	13.8	14.3	14.7	15.7	15.4	16.9	17.5	17.2		18.6		19.8	19.8 1,126
19.2 12.7 14.4 13.9 17.0 16.8 16.4 17.4 17.5 20.2 20.4 20.0 19.4 23.7 23.4 23.4 24.5 23.7 24.8 20.6 15.9 15.9 15.9 16.5 21.8 23.4 23.4 23.5 23.4 13.1 26.7 27.9 27.0 33.5 34.4 33.7 33.6 33.0 13.1 9.5 12.8 11.6 16.7 17.3 20.8 21.6 23.0 18.4 10.7 12.2 11.3 13.8 15.5 15.9 16.8 18.2 18.4 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.6 28.1 16.3 17.2 17.3 17.3 19.8 17.0 16.1 16.6 28.1 14.9 13.3 13.6 15.9 17.5 18.8 17.9 19.6 28.1 14.9 13.0 12.6 16.9 17.5 18.8 17.9 19.6 28.1 11.9 17.7 17.4 18.7 23.1 24.7 23.9 22.4 24.7 29.1 11.5 13.8 12.7 14.8 14.9 14.9 14.9 16.1 15.4 15.2 13.2 13.3 15.0 15.7 15.9 16.6 17.7 27.1 14.4 17.5 18.5 21.0 20.3 18.3 19.2 27.2 14.4 17.5 18.5 21.0 20.3 15.7 16.0 16.3 27.3 17.4 17.7 17.4 18.7 20.9 22.0 22.7 27.4 15.2 13.3 15.0 15.7 16.0 16.3 17.2 27.5 13.8 15.1 18.6 20.9 22.0 22.7 27.1 14.5 18.6 15.1 20.5 20.5 20.5 27.2 14.4 17.5 18.5 21.0 20.3 18.3 19.3 27.3 17.4 17.7 17.4 18.7 20.9 22.0 22.7 27.4 15.5 18.2 13.3 15.0 15.7 16.0 16.3 17.2 27.1 14.5 18.6 15.1 20.5 22.3 22.5 27.2 14.4 17.5 18.5 21.0 20.3 18.3 27.3 17.2 17.3 17.5 18.5 21.0 27.4 18.7 18.7 18.7 18.7 27.5 18.7 18.7 18.7 18.7 28.6 18.7 18.7 18.7 18.7 29.6 18.7 18.7 18.7 29.7 18.7 18.7 18.7 21.4 15.1 18.6 20.9 22.3 22.5 21.5 18.7 18.7 18.7 21.6 18.7 18.7 18.7 21.6 18.7 18.7 18.7 21.6 18.7 18.7 18.7 21.6 18.7 18.7 18.7 21.6 18.7 18.7 18.7 21.7 18.7 18.7 18.7 21.8 18.7 18.7 18.7 21.8 18.7 18.7 18.7	Kamphaeng Phet	16.8	12.0	14.7	15.9	18.8	20.9	19.5	21.4	20.6	21.4		21.6		24.3	24.3 957
i 29.2 20.4 20.0 19.4 23.7 23.4 24.5 23.7 23.8 23.0 20.6 15.9 15.9 16.5 21.8 23.4 24.5 23.7 24.8 23.0 20.6 15.9 15.9 16.5 21.8 23.4 23.6 25.9 24.4 13.1 25.7 27.9 27.0 23.5 23.4 23.6 25.9 24.4 13.1 25.7 12.2 11.3 13.8 15.5 15.9 16.8 18.2 21.6 21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 15.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 15.5 19.7 23.0 22.5 18.2 16.3 17.2 17.3 13.8 15.5 19.7 23.0 22.5 16.6 16.3 17.2 17.3 13.8 18.9 20.5 19.7 23.0 22.5 16.6 16.3 17.4 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 24.6 23.8 28.9 25.5 26.8 25.5 24.9 24.7 23.9 26.6 27.7 23.1 24.3 22.9 24.4 24.7 24.7 24.6 23.8 24.9 24.7 23.2 24.7 23.9 26.6 27.7 23.1 24.1 24.1 25.2 24.6 23.8 24.7 24.9 24.7 23.9 26.6 27.7 24.8 24.9 24.7 24.9 24.7 23.9 26.6 27.7 24.8 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.9 24.7 24.9 24.9 24.7 24.9 24.9 24.9 24.7 24.9 24.9 24.9 24.9 24.7 24.9 24.9 24.9 24.9 24.9 24.9 24.9 24.9	Khon Kaen	19.2	12.7	14.4	13.9	17.0	16.8	16.4	17.4	17.5	19.4		20.0		22.7	22.7 2,280 1
8800 20.6 15.9 15.9 15.9 21.8 23.4 23.6 25.9 24.4 13.1 26.7 27.9 27.0 33.5 33.4 33.7 23.6 23.0 13.1 26.7 27.9 27.0 33.5 33.4 33.7 23.6 23.0 21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.2 25.1 16.3 17.2 17.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 16.5 14.3 14.5 15.2 18.3 12.4 13.3 13.6 15.2 16.9 17.5 18.8 17.9 19.6 23.1 14.4 18.7 23.1 24.3 22.9 24.4 24.9 400 17.7<	Chanthaburi	29.2	20.4	20.0	19.4	23.7	23.4	24.5	23.7	24.3	24.5		24.4		28.5	28.5 793
41.1 26.7 27.9 27.0 33.5 34.4 33.7 33.6 33.0 13.1 13.1 13.1 13.1 13.1 13.1 13.1	Chachoengsao	20.6	15.9	15.9	16.5	21.8	23.4	23.6	25.9	24.4	24.3		24.7		25.9	25.9 1,013
13.1 9.5 12.8 11.6 16.7 17.3 20.8 21.6 23.0 nn 16.4 10.7 12.2 11.3 13.8 15.5 15.9 16.8 18.2 21.6 23.0 21.6 23.0 22.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.2 25.1 16.3 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.2 25.1 16.3 12.4 13.3 12.6 16.5 15.5 14.3 14.5 15.2 25.1 16.6 16.6 16.3 12.4 13.0 12.6 16.9 17.5 18.8 17.9 19.6 17.0 16.1 16.6 12.1 12.1 12.1 12.1 12.1 12.1	Chon Buri	41.1	26.7	27.9	27.0	33.5	34.4	33.7	33.6	33.0	31.0			31.3	31.3 33.7	31.3 33.7 2,619
n 164 107 122 11.3 138 15.5 15.9 16.8 18.2 21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 13.3 13.6 15.2 15.5 18.5 19.7 23.0 22.5 18.6 16.3 12.4 13.3 13.6 15.2 15.5 18.8 17.9 19.6 16.6 16.3 12.4 13.0 12.6 16.9 17.5 18.8 17.9 19.6 12.3 14.4 24.7 23.1 23.1 24.6 23.8 28.9 25.5 26.8 25.5 24.9 24.4 24.7 23.1 24.2 24.6 23.8 28.9 25.5 26.8 25.5 24.9 24.4 24.7 23.9 25.1 11.5 13.8 12.7 14.8 14.9 24.7 23.9 28.6 27.7 23.7 23.7 23.1 22.9 24.4 24.7 23.9 28.6 27.7 23.7 23.1 22.0 14.1 13.5 16.4 16.7 16.2 17.3 19.2 21.6 17.7 18.6 20.9 22.0 22.3 22.3 21.6 17.7 23.1 22.1 23.1 23.1 23.1 23.1 23.1 23.1	Chainat	13.1	9.5	12.8	11.6	16.7	17.3	20.8	21.6	23.0	22.7	7		24.9	24.9 23.7	24.9 23.7 372
21.6 13.7 16.3 13.9 18.9 20.5 19.7 23.0 22.5 18.4 12.4 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.5 14.3 14.5 15.2 15.3 14.5 15.2 14.3 14.5 15.2 14.3 14.5 15.2 14.3 14.5 15.2 14.3 14.5 15.2 14.3 14.5 15.2 14.3 14.5 15.2 14.5 14.5 14.5 14.5 14.5 14.5 14.5 14.5	Chaiyaphum	16.4	10.7	12.2	11.3	13.8	15.5	15.9	16.8	18.2	19	19.5		19.7	19.7 22.2 1	19.7 22.2 1,384
18.4 12.4 13.3 13.6 15.2 15.5 14.3 14.5 15.2 15.1 14.3 15.1 15.2 15.1 14.3 14.5 15.2 15.1 16.3 17.2 17.3 17.3 19.8 17.0 16.1 16.6 16.9 17.5 18.8 17.0 16.1 16.6 16.9 17.5 18.8 17.0 16.1 16.6 16.9 17.5 18.8 17.0 16.1 16.6 17.0 18.1 14.9 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 17.0 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.9 24.4 24.7 24.9 24.9 24.9 24.9 25.5 26.9 27.7 23.9 28.6 27.7 23.7 23.9 28.6 27.7 23.9 28.6 28.0 28.0 28.0 28.0 28.0 28.0 28.0 28.0	Chumphon	21.6	13.7	16.3	13.9	18.9	20.5	19.7	23.0	22.5	2	21.3	1.3 21.5		21.5 23.9	21.5 23.9 717
25.1 16.3 17.2 17.3 17.3 19.8 17.0 16.1 16.6 16.3 12.4 13.0 12.6 16.9 17.5 18.8 17.9 19.6 19.6 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 24.7 24.6 23.8 28.9 25.5 26.8 25.5 24.9 24.4 24.7 24.7 25.1 25.1 25.1 25.1 25.1 25.1 25.1 25.1	Chiang Rai	18.4	12.4	13.3	13.6	15.2	15.5	14.3	14.5	15.2	15	15.7		17.1	17.1	17.1 19.3 1,250
16.3 12.4 13.0 12.6 16.9 17.5 18.8 17.9 19.6 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 24.6 23.8 28.9 25.5 26.8 25.5 24.9 26.4 27.7 17.4 19.9 17.7 17.4 18.7 23.2 24.0 23.9 28.6 27.7 16.0 17.7 11.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 16.2 17.3 12.9 10.5 11.8 14.3 15.1 15.9 16.6 17.7 23.1 12.9 14.7 15.1 15.0 20.3 18.3 19.3 18.7 18.2 11.6 11.6 11.7 18.0 18.3 15.1 15.9 16.6 17.7 18.0 18.0 18.3 19.2 19.2 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5	Chiang Mai	25.1	16.3	17.2	17.3	17.3	19.8	17.0	16.1	16.6	15	15.9		17.4	17.4 18.7	17.4 18.7 1,639 1
23.1 14.9 18.8 18.7 23.1 24.3 22.9 24.4 24.7 31.4 24.2 24.6 23.8 28.9 25.5 26.8 25.5 24.9 yok 19.9 17.7 17.4 18.7 23.2 24.7 23.9 28.6 27.7 hom 26.1 17.8 17.9 21.4 24.2 24.0 22.3 22.3 21.6 anom 17.7 11.5 13.8 12.7 14.8 14.9 16.7 16.2 17.3 12.9 10.5 11.8 14.3 15.1 16.4 16.7 16.2 17.3 19.2 21.4 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 18.7 16.0 11.7 13.9 12.2 14.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 13.1 16.4 15.1 15.4 15.4 15.4 15.4 15.4 15.4 15	Trang	16.3	12.4	13.0	12.6	16.9	17.5	18.8	17.9	19.6		17.4		18.5	18.5 21.7	18.5 21.7 833
31.4 24.2 24.6 23.8 28.9 25.5 26.8 25.5 24.9 (ok 19.9 17.7 17.4 18.7 23.2 24.7 23.9 28.6 27.7 hom 26.1 17.8 17.9 21.4 24.2 24.0 22.3 22.3 21.6 anom 17.7 11.5 13.8 12.7 14.8 16.7 16.2 17.3 19.2 tchasima 18.3 12.6 14.1 13.5 16.4 16.7 16.2 17.3 19.2 anom 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 anom 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 anom 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 anom 22.1 14.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 anom 22.1 14.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 anom 22.1 14.5 18.8 15.1 2.7 12.3 12.7 12.0 12.3 anom 23.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 anom 24.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 13.3 13.3 13.3 15.0 13.7 14.9 14.7 14.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 14.9 14.7 15.9 16.5 20.5 22.3 23.3 25.2 24.8 16.0 16.3 17.6 23.7 25.3 23.3 25.2 24.8 16.6 16.1 11.6 11.6 11.6 11.6 11.6 11	Trad	23.1	14.9	18.8	18.7	23.1	24.3	22.9	24.4	24.7	2;	22.8	2.8 22.7	22.7	22.7	22.7 27.8 356
yok 19.9 17.7 17.4 18.7 23.2 24.7 23.9 28.6 27.7 hom 26.1 17.8 17.9 21.4 24.2 24.0 22.3 22.3 21.6 anom 17.7 11.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 shorm 18.3 12.6 14.1 13.5 16.4 16.7 16.2 17.3 19.2 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.2 11.6 11.6 12.2 14.4 15.1 <td>Tak</td> <td>31.4</td> <td>24.2</td> <td>24.6</td> <td>23.8</td> <td>28.9</td> <td>25.5</td> <td>26.8</td> <td>25.5</td> <td>24.9</td> <td>26.5</td> <td>Ċī</td> <td>5 32.1</td> <td></td> <td>32.1</td> <td>32.1 25.9</td>	Tak	31.4	24.2	24.6	23.8	28.9	25.5	26.8	25.5	24.9	26.5	Ċī	5 32.1		32.1	32.1 25.9
hom 26.1 17.8 17.9 21.4 24.2 24.0 22.3 22.3 21.6 anom 17.7 11.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 anom 17.7 11.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 anom 17.7 11.5 13.4 12.6 14.1 13.5 16.4 16.7 16.2 17.3 19.2 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 16.2 11.6 11.7 13.2 13.3 15.0 15.7 16.0 16.3 17.2 18.0 11.7 13.9 12.2<	Nakhon Nayok	19.9	17.7	17.4	18.7	23.2	24.7	23.9	28.6	27.7	28.2	2	2 26.7		26.7	26.7 36.8 370
anom 17.7 11.5 13.8 12.7 14.8 14.9 14.9 16.1 15.8 cchasima 18.3 12.6 14.1 13.5 16.4 16.7 16.2 17.3 19.2 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 yan 15.2 11.6 11.6 18.5 21.0 20.3 18.3 19.3 18.7 yan 16.2 11.6 11.0 9.4 12.7 12.3 19.3 18.7 yan 16.2 11.7 13.9 12.2 13.3 15.0 20.3 18.3 19.3 18.7 yan 16.2 11.6 11.0 9.4 12.7 12.3 12.3 17.2 yan 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 yan 16.5 18.8 15.1 23.0 22.9 22.3 </td <td>Nakhon Pathom</td> <td>26.1</td> <td>17.8</td> <td>17.9</td> <td>21.4</td> <td>24.2</td> <td>24.0</td> <td>22.3</td> <td>22.3</td> <td>21.6</td> <td>22.1</td> <td></td> <td>1 20.7</td> <td></td> <td>20.7</td> <td>20.7 23.0</td>	Nakhon Pathom	26.1	17.8	17.9	21.4	24.2	24.0	22.3	22.3	21.6	22.1		1 20.7		20.7	20.7 23.0
chasima 18.3 12.6 14.1 13.5 16.4 16.7 16.2 17.3 19.2 wan 13.4 9.2 10.5 11.8 14.3 15.1 15.9 16.6 17.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 22.1 14.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 21.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 18.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 niri Khan 21.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7	Nakhon Phanom	17.7	11.5	13.8	12.7	14.8	14.9	14.9	16.1	15.8	16.6	0,	17.6		17.6	17.6 19.5
wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 22.1 14.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 21.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 ani 20.6 14.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 29.7 18.0 15.1 16.5 20.5 22.3 29.3 29.6 29.7 18.0 13.1 16.5 20.5 22.3 21.5 22.1 23.5 18.0 13.4 15.1	Nakhon Ratchasima	18.3	12.6	14.1	13.5	16.4	16.7	16.2	17.3	19.2	19.3	ω		20.1	20.1 22.5	20.1 22.5 3,291
wan 17.3 12.9 14.7 15.1 18.6 20.9 22.0 22.7 23.7 22.1 14.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 21.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 ani 20.6 14.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.7 14.8 15.1 16.5 20.5 22.3 19.9 20.1 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 12.8 8.	Nakhon Sri Thammarat	13.4	9.2	10.5	11.8	14.3	15.1	15.9	16.6	17.7	17.7	.7	.7 17.8		17.8	17.8 19.8
22.1 1.4.4 17.6 18.5 21.0 20.3 18.3 19.3 18.7 21.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 ani 20.6 14.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Nakhon Sawan	17.3	12.9	14.7	15.1	18.6	20.9	22.0	22.7	23.7	23.7	7	7 24.7		24.7	24.7 26.5
21.4 15.2 13.2 13.3 15.0 15.7 16.0 16.3 17.2 16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 1iii Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Nonthaburi	22.1	14.4	17.6	18.5	21.0	20.3	18.3	19.3	18.7	18.1	_	1 20.5		20.5	20.5 20.4
16.2 11.6 11.0 9.4 12.7 12.3 12.7 12.0 12.3 16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 1ni 20.6 14.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 18.9 13.9 13.2 13.3 15.0 13.7 14.9 14.7 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Narathiwat	21.4	15.2	13.2	13.3	15.0	15.7	16.0	16.3	17.2	16.9	.9	.9 16.9		16.9	16.9 17.5
16.0 11.7 13.9 12.2 14.4 15.4 15.1 15.8 18.0 ani 20.6 14.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.9 18.9 13.9 13.2 13.3 15.0 13.7 14.9 14.7 14.8 15.1 16.3 23.7 25.3 23.3 25.2 24.8 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4 21.6 11.6 11.6	Nan	16.2	11.6	11.0	9.4	12.7	12.3	12.7	12.0	12.3	12	12.8	2.8 12.6		12.6	12.6 15.3
ani 20.6 14.5 18.8 15.1 15.4 15.1 15.8 18.0 hiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Bueng Kan	1	1	1	1	1	1	1	1	1		1	1			- 21.0
Thani 20.6 14.5 18.8 15.1 23.0 22.9 22.3 19.9 20.1 pp Khiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 buri 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 buri 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 ya 17.2 13.1 16.3 17.6 23.7 25.3 23.3 25.2 24.8 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 19a 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Buri Ram	16.0	11.7	13.9	12.2	14.4	15.4	15.1	15.8	18.0	2	20.0	0.0 20.8		20.8	20.8 23.5
p Khiri Khan 21.5 18.2 20.9 21.7 26.8 28.0 29.3 29.6 29.7 buri 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 23.5 buri 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 ya 17.2 13.1 16.3 17.6 23.7 25.3 23.3 25.2 24.8 ya 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 ya 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Pathum Thani	20.6	14.5	18.8	15.1	23.0	22.9	22.3	19.9	20.1	_	17.7	7.7 18.6		18.6	18.6 17.4
buri 18.7 14.8 15.1 16.5 20.5 22.3 21.5 22.1 23.5 18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 ya 17.2 13.1 16.3 17.6 23.7 25.3 23.3 25.2 24.8 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 1ga 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Prachuap Khiri Khan	21.5	18.2	20.9	21.7	26.8	28.0	29.3	29.6	29.7	N2	29.8	9.8 29.1		29.1	29.1 32.8
18.9 13.9 13.2 13.3 13.3 15.0 13.7 14.9 14.7 ya 17.2 13.1 16.3 17.6 23.7 25.3 23.3 25.2 24.8 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 1ga 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Prachinburi	18.7	14.8	15.1	16.5	20.5	22.3	21.5	22.1	23.5		23.7	23.7 22.8		22.8	22.8 27.1
ya 17.2 13.1 16.3 17.6 23.7 25.3 23.3 25.2 24.8 12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 19a 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Pattani	18.9	13.9	13.2	13.3	13.3	15.0	13.7	14.9	14.7		15.5	15.5 14.2	14.2	14.2	14.2 16.1 744
12.8 8.6 10.1 9.0 11.8 13.1 11.6 11.6 11.6 11.6 11.9 18.1 18.1 18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Ayutthaya	17.2	13.1	16.3	17.6	23.7	25.3	23.3	25.2	24.8	2	24.7			23.9	23.9 24.2
18.1 13.4 12.9 14.1 20.0 20.9 20.9 21.3 21.4	Phayao	12.8	8.6	10.1	9.0	11.8	13.1	11.6	11.6	11.6	12.2	2	.2 11.9		11.9	11.9 14.3
	Phang Nga	18.1	13.4	12.9	14.1	20.0	20.9	20.9	21.3	21.4	21.5	Ċī	5 19.2		19.2	19.2 25.2

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							Rec	Repeat Birth Ratio: 1000	0: 1000						
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Province 1-77	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	No. of Childbirth	No. of adolescent gilrs aged 10-17	Delivery ratio: 1000							
Phichit	16.3	11.7	14.1	13.5	15.7	17.3	19.1	20.6	20.6	22.1	23.7	25.6	685	35,002	19.6
Phitsanulok	16.5	11.5	14.4	15.0	17.6	18.9	18.4	17.5	19.1	19.1	19.5	22.2	1,024	57,579	17.8
Phetchaburi	19.3	13.7	16.2	19.1	21.2	23.7	24.0	23.7	24.7	24.8	25.2	27.2	622	30,367	20.5
Phetchabun	13.6	9.4	11.8	12.4	15.6	15.2	15.7	16.8	16.7	17.5	17.6	20.3	1,104	66,238	16.7
Phrae	10.7	8.0	7.4	8.2	9.3	11.7	6.6	11.3	10.2	11.6	12.1	14.6	292	27,257	10.7
Phuket	26.4	18.1	23.2	22.6	22.9	24.5	23.3	24.9	24.5	24.6	23.8	26.1	539	27,393	19.7
Mahasarakham	13.1	9.4	10.9	11.4	11.5	12.7	12.3	12.5	14.3	14.5	14.6	15.9	927	65,836	14.1
Mukdahan	15.0	10.6	11.9	11.6	13.9	13.7	13.6	14.6	14.8	16.6	17.1	19.0	429	25,449	16.9
Mae Hong Son	32.9	23.3	21.3	20.1	26.2	26.4	24.4	20.2	21.0	21.4	23.9	25.2	407	20,424	19.9
Yasothon	16.8	10.5	12.6	10.9	13.0	12.8	12.9	14.1	16.0	15.8	16.5	18.6	282	37,036	15.9
Yala	23.6	16.0	14.0	14.4	18.1	18.4	18.2	18.1	18.3	18.6	17.9	19.9	758	45,371	16.7
Roi Et	13.1	8.8	6.6	6.6	12.3	11.7	12.0	12.5	13.4	13.6	14.4	17.0	1,375	92,027	14.9
Ranong	17.4	13.7	14.7	14.2	16.6	18.3	19.3	18.8	15.0	19.4	19.4	20.5	250	13,907	18.0
Rayong	30.9	23.7	26.6	25.4	30.5	34.5	32.5	32.1	32.5	32.0	30.6	33.2	1,213	45,570	26.6
Ratchaburi	24.1	17.6	20.0	19.1	24.8	24.1	24.4	25.5	24.0	24.9	25.2	28.0	1,267	52,805	22.7
Lopburi	18.5	12.2	16.2	18.1	22.2	23.4	22.5	23.5	23.7	24.3	22.6	26.2	396	48,161	20.0
Lampang	12.4	7.8	8.0	8.5	10.0	12.3	10.7	10.5	11.0	11.0	11.6	12.5	484	44,876	10.8
Lamphun	15.0	11.8	11.4	11.1	11.5	14.5	13.1	12.9	12.6	13.2	13.4	15.1	267	23,078	11.6
Loei	14.3	10.3	13.5	14.1	17.3	18.1	17.4	18.3	19.6	20.4	21.0	23.7	262	41,632	19.1
Sisaket	15.4	10.4	10.8	10.0	11.6	12.5	12.3	13.6	14.4	15.6	16.7	18.4	1,664	109,514	15.2
Sakolnakhon	16.5	11.0	12.6	13.6	15.6	15.7	16.0	15.8	17.3	18.8	20.2	21.0	1,560	82,917	18.8
Songkhla	19.1	12.5	14.0	14.9	17.3	18.4	17.8	17.4	17.5	17.5	18.9	21.3	1,745	102,762	17.0
Satun	20.9	14.7	13.7	15.1	17.3	21.0	20.0	20.0	21.6	22.7	21.8	22.7	526	24,281	21.7
Sakut Prakan	21.0	15.1	18.2	18.1	22.1	21.8	22.2	21.8	20.5	20.4	21.3	25.0	1,694	84,771	20.0
Samut Songkhram	15.9	10.6	14.6	14.8	19.4	19.2	18.4	17.9	17.7	17.2	19.0	22.9	208	11,808	17.6
Samut Sakhon	42.3	26.3	25.4	23.5	32.9	32.1	31.5	30.7	32.6	30.6	31.3	34.0	086	35,594	27.5
Sa Kaeo	17.3	11.4	14.2	14.1	17.2	19.1	19.9	20.1	21.8	20.9	22.7	24.8	770	39,656	19.4
Saraburi	22.1	17.0	20.0	19.1	27.9	25.8	25.6	25.8	25.6	27.2	26.6	29.9	266	42,453	23.5
Sing Buri	27.5	15.7	18.7	18.4	24.2	25.8	24.8	25.8	25.5	25.2	25.0	26.5	241	12,473	19.4
Sukhothai	13.2	9.3	12.6	12.4	15.2	17.3	18.2	18.4	18.0	19.8	20.2	22.1	614	37,001	16.6
Suphan Buri	20.0	14.3	15.9	17.5	22.2	24.4	24.3	23.5	23.5	25.1	25.3	26.6	1,140	54,130	21.1
Surat Thani	24.7	15.9	17.0	18.0	20.1	22.4	22.2	25.6	24.8	25.4	22.4	25.8	1,496	73,157	20.4
Surin	13.9	9.7	10.9	10.0	11.8	12.2	12.2	13.3	14.5	15.7	17.7	19.6	1,728	103,939	16.6
Nong Khai	17.8	11.2	14.0	13.6	14.8	15.5	15.7	16.6	17.1	17.3	18.1	16.9	909	37,756	16.0
Nong Bua Lam Phu	15.3	13.0	16.2	14.8	15.2	17.2	16.8	17.4	18.4	19.6	19.2	22.2	681	37,088	18.4
Ang Thong	16.8	14.5	16.3	16.3	22.4	24.5	21.9	24.6	23.8	24.9	24.7	25.7	367	17,784	20.7
Ammat Charoen	14.6	10.9	12.3	8.6	11.4	12.2	12.3	13.5	14.5	14.0	15.8	17.5	381	27,482	13.8

							Re	Repeat Birth Ratio: 1000	o: 1000						
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Province 1-77	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000		No. of adolescent gilrs aged 10-17	Delivery ratio: 1000							
Udon Thani	21.5	12.9	16.6	17.0	18.4	17.7	17.8	17.7	18.6	19.3	20.1	23.3	2,100	114,171	18.4
Uttaradit	14.1	9.9	12.5	11.3	13.9	14.8	14.8	15.4	15.0	15.3	17.5	18.6		28,806	15.4
Uthai Thani	20.1	13.5	14.4	16.3	18.0	19.8	21.2	24.7	23.1	24.0	24.7	28.0		21,259	21.0
Ubon Ratchathani	18.0	11.8	13.8	12.7	15.3	15.5	15.5	16.5	17.4	19.2	19.4	21.6		140,277	17.2
Total	12.3	13.3	15.1	15.2	18.1	18.9	18.6	19.1	19.5	19.8	20.2	22.2		4,500,180	18.1
Nationwide*	12.3	13.3	15.1	15.2	18.1	18.9	18.6	19.1	19.5	19.8	20.2	22.2			
Northern region	11.2	9.1	13.8	10.3	16.3	13.0	17.0	12.8	17.3	13.1	18.9	14.7	12,727	773,290	16.5
Northeastern region	10.7	11.3	13.2	12.6	14.7	15.1	15.0	15.8	16.9	17.8	18.6	20.8	27,049	1,560,556	17.3
Central region	15.0	16.4	18.7	19.5	23.9	24.4	23.9	23.8	23.5	23.3	23.3	25.3	29,625	1,468,971	20.2
Southern region	12.3	13.1	13.7	14.1	16.7	18.2	18.0	18.9	19.2	19.3	18.9	21.1	11,995	697,363	17.2

Source of information for each indicator
*Divided into regions based on the National Statistical Office of Thailand in line with the information of the Office of National Economic and Social Development Board

Table 3: Repeat birth of women aged 15-19 years old per 1,000 women in the same age group

							Re	Repeat birth ratio: 1000	0: 1000						
Oscilios 4	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Repeat birth	No. of women aged 15-19	Repeat birth ratio: 1000							
Krabi	5.1	9.9	4.8	3.8	4.8	6.3	6.2	9.9	7.7	6.8	7.1	8.5	163	17,673	9.2
Bangkok	4.4	4.2	5.4	6.2	6.5	7.5	7.8	7.7	7.8	7.4	7.0	7.3	1,398	208,525	6.7
Kanchanaburi	4.8	5.1	5.3	0.9	7.2	7.5	7.8	8.7	8.5	8.5	7.6	8.7	264	30,497	8.7
Kalasin	3.0	3.7	3.7	2.8	3.4	3.5	3.9	3.9	3.7	3.5	4.3	4.2	165	36,704	4.5
Kamphaeng Phet	3.2	3.6	4.0	4.0	4.9	4.9	4.9	4.9	4.6	5.7	6.1	8.9	152	26,493	5.7
Khon Kaen	3.3	3.0	3.2	2.8	2.8	3.6	3.6	3.9	3.5	4.2	4.4	4.8	340	66,931	5.1
Chanthaburi	4.6	5.2	0.9	5.3	5.6	6.9	7.3	6.5	8.1	7.3	6.8	9.3	170	19,278	8.8
Chachoengsao	5.3	4.7	4.5	4.7	6.1	5.1	7.4	7.5	8.1	7.4	6.8	7.7	225	24,722	9.1
Chon Buri	7.8	8.6	8.2	7.8	10.9	11.3	12.0	11.4	6.6	11.2	6.6	10.5	540	48,828	11.1
Chainat	2.0	2.0	3.8	3.1	3.5	3.0	3.0	3.8	4.4	4.7	5.6	4.9	22	10,695	5.3
Chaiyaphum	2.4	2.0	2.4	2.3	2.6	3.4	3.6	3.9	3.5	4.1	3.8	5.0	210	40,768	5.2
Chumphon	5.1	4.6	5.4	3.5	4.2	6.0	5.3	0.9	6.9	6.3	7.0	7.9	117	18,290	6.4
Chiang Rai	2.0	4.8	5.6	4.8	5.3	5.2	5.0	4.4	4.9	3.8	4.6	5.7	241	44,079	5.5
Chiang Mai	6.5	6.4	0.9	6.2	5.8	5.6	5.3	5.4	4.8	4.3	4.2	4.5	309	59,810	5.2
Trang	4.5	5.1	3.8	4.0	6.4	5.7	6.8	6.5	7.4	5.7	7.1	7.5	175	25,596	6.8
Trad	5.7	5.6	7.8	5.8	7.5	8.6	8.0	6.5	7.3	9.9	6.9	7.6	72	8,179	8.8
Tak	11.2	12.7	14.2	13.4	18.6	15.5	15.5	13.9	13.2	12.9	12.2	11.5	259	21,587	12.0
Nakhon Nayok	5.4	5.5	4.9	5.4	7.1	9.6	8.8	10.0	9.6	12.5	9.5	11.1	82	8,858	9.3
Nakhon Pathom	2.0	5.0	4.9	5.7	6.4	5.9	7.2	7.4	7.2	7.0	5.9	7.1	243	33,300	7.3
Nakhon Phanom	2.9	2.8	2.9	3.5	2.8	3.3	3.7	4.0	3.9	4.0	3.6	4.4	127	27,094	4.7
Nakhon Ratchasima	3.5	3.3	3.7	3.3	4.3	4.3	4.2	4.5	4.7	4.9	4.8	0.9	260	93,913	0.9
Nakhon Sri Thammarat	3.8	4.0	3.6	3.6	4.5	4.8	5.1	5.3	6.1	5.7	6.4	6.7	419	57,598	7.3
Nakhon Sawan	3.1	3.4	3.8	4.1	4.3	5.2	5.6	5.8	7.5	8.9	5.7	7.0	274	37,050	7.4
Nonthaburi	4.1	4.3	5.8	5.3	5.8	7.0	9.9	7.0	6.9	6.9	7.5	9.9	274	38,895	7.0
Narathiwat	7.2	7.8	7.1	6.7	5.9	5.7	6.2	5.7	5.3	6.1	0.9	0.9	194	34,350	5.6
Nan	4.1	4.7	4.7	3.9	4.3	3.3	3.5	3.0	3.4	3.4	2.2	3.0	59	17,404	3.4
Bueng Kan	1	ı	1	1	1	ı	1	ı	ı	1	ı	6.4	123	15,503	7.9
Buri Ram	2.7	3.2	3.1	2.7	3.4	4.1	3.3	3.8	3.9	4.6	4.6	5.0	328	62,121	5.3
Pathum Thani	4.8	5.1	5.0	4.6	7.2	6.9	7.5	7.4	7.3	6.9	9.9	9.9	566	38,582	6.9
Prachuap Khiri Khan	6.4	5.9	7.3	6.2	7.9	10.7	11.9	10.1	9.9	10.5	10.8	9.5	210	18,226	11.5
Prachinburi	3.8	3.9	3.7	3.7	4.3	0.9	7.1	6.2	5.3	6.1	8.9	7.7	123	16,971	7.2
Pattani	5.6	6.4	7.0	9.9	6.5	7.5	6.3	7.0	9.9	6.8	5.9	6.2	166	31,459	5.3
Ayutthaya	3.9	4.6	5.5	5.5	6.5	8.1	8.5	10.2	9.3	9.5	9.6	9.2	254	27,175	9.3
Phayao	2.2	2.5	2.8	2.1	1.9	2.8	2.4	2.2	2.2	2.4	2.3	2.4	29	19,698	3.0
Phang Nga	5.3	3.6	3.6	6.5	5.6	6.2	7.0	0.9	7.5	7.3	9.9	7.2	75	9,370	8.0
Phatthalung	2.8	2.1	2.4	2.3	2.6	3.6	3.6	3.5	4.4	4.4	4.3	5.0	103	19,174	5.4
Phichit	4.3	3.0	3.8	3.4	2.9	4.1	4.1	5.3	4.8	5.1	9.9	0.9	93	18,443	5.0
Phitsanulok	3.6	3.3	4.0	3.5	3.8	5.0	2.0	3.0	3.8	4.2	3.8	4.7	169	32,299	5.2
Phetchaburi	3.0	3.7	3.3	5.2	5.4	2.7	6.2	7.3	6.1	6.7	7.6	6.8	96	16,186	5.9

Februery 1-1 -																
Part									peat birth ratio): 1000			3		3	
bath bath <t< th=""><th>Province 1-77</th><th>2000</th><th>2001</th><th>2002</th><th>2003</th><th>2004</th><th>2002</th><th>2000</th><th>2007</th><th>2000</th><th>8007</th><th>2010</th><th>2011</th><th></th><th>No of</th><th></th></t<>	Province 1-77	2000	2001	2002	2003	2004	2002	2000	2007	2000	8007	2010	2011		No of	
National 3,1 2,2 3,1 2,2 3,2 3,2 3,2 3,2 3,2 3,2 3,2 3,2 3,2		Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000		No. of women aged	Repeat birth ratio: 1000							
abitam 6.1 1.9 1.9 2.0 2.0 1.8 1.9 2.4 2.5 1.7 2.1 2.1 2.1 2.5 3.9 15.40 abitam 6.2 2.3 2.4 2.3 2.4 2.3 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	Phetchabun	3.1	2.7	3.1	3.2	3.6	4.1	4.5	4.5	4.7	4.6	4.8	5.4	188	34,820	5.4
below in the field of the field	Phrae	1.7	1.9	2.0		1.8	1.9	2.4	2.5	1.7	2.1	2.1	2.5	39	15,436	2.5
In California 24 25 26 26 27 20 20 35 35 31 37 37 34 24 41 41 41 41 68 227 120 10 24 25 26 27 20 20 32 32 32 32 32 32 32 32 32 32 32 32 32	Phuket	6.6	5.7	8.7	7.0	8.3	8.8	8.7	8.2	8.2	9.4	8.9	10.1	135	14,322	9.4
Seniori R. 24. 26. 22. 22. 22. 22. 22. 22. 22. 22. 22	Mahasarakham	2.4	2.3	2.4	2.3	2.6	3.5	3.3	3.1	3.7	3.4	2.4	4.1	143	36,227	3.9
9 Sont 77 99 85 72 120 103 103 103 103 103 103 103 103 103 10	Mukdahan	2.4	2.6	2.2		2.0	2.6	2.5	3.5	3.2	2.8	3. <u>1</u>	3.7	65	13,502	4.8
Region 19 28 29 29 29 29 20 20 20 30 30 30 30 43 41 40 40 40 40 40 40 40	Mae Hong Son	7.7	9.9	8.5	7.2	12.0	10.8	10.3	7.8	& .S	6.7	6.3	7.0	99	10,751	9.2
Relation Relation Relation Control Relation Relation Control Relation Cont	Yasothon	2.9	1.9	2.8	2.0	2.9	2.6	3.0	2.8	3.2	3.3	4.3	4.1	98	19,850	4.9
24 23 27 11 25 27 27 28 29 29 29 29 29 29 29 29 29 29 29 29 29	Yala	8.2	6.8	7.7	6.5	7.1	6.5	8.4	7.9	7.6	7.3	6.4	6.7	168	23,540	7.1
39 60 42 46 47 62 50 42 46 47 62 50 50 42 51 52 50 45 728 67 82 107 82 107 81 107 110 120 120 120 120 120 120 120 120 120	Roi Et	2.4	2.3	2.7	1.7	2.6	2.7	2.5	2.7	2.9	3.0	2.9	4.0	228	49,934	4.6
diff 6.7 8.2 10.1 9.1 10.7 11.0 12.5 12.8 12.7 11.5 10.3 11.5 10.3 11.5 20.2 20.2 20.2 30	Ranong	3.9	6.0	4.2	4.6	4.7	5.2	5.4	6.8	4.7	4.2	5.1	5.9	45	7,248	6.2
ari di file si	Rayong	6.7	8.2	10.1	9.1	10.7	11.0	12.6	12.8	12.7	11.5	10.3	11.3	289	23,720	12.2
1.	Ratchaburi	5.4	5.9	6.7	6.3	6.2	7.2		8.0	8.7	9.9	9.0	10.2	288	30,181	9.5
No.	Lopburi	3.6	3.7	4.4	5.5	4.8	5.8	5.8	6.2	7.8	8.2	6.5	8.4	165	25,526	6.5
No.	Lampang	2.4	1.9	1.7	1.4	1.9	1.9	1.8	2.1	2.2	1.8	1.7	1.8	49	25,480	1.9
13 19 19 18 29 34 33 33 33 35 41 45 45 117 22.333 thon 24 25 24 27 34 35 35 41 35 41 38 228 452.00 thon 28 25 24 22 27 34 33 35 35 35 31 35 41 38 228 452.00 thon 28 25 25 24 22 27 34 33 35 35 35 35 37 41 38 228 452.00 thon 28 25 25 24 22 27 34 33 35 35 35 35 37 41 38 228 452.00 thon 39 46 48 45 45 45 46 45 45 45 45 45 45 45 45 45 45 45 45 45	Lamphun	2.6	2.5	2.4	2.2	2.8			2.1	2.5	1.8	2.6	3.0	26	13,033	2.0
10. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Loei	1.3	1.9	1.8	2.9	3.4	ယ	ယ	3.5	<u>3.1</u>	3.5 5	4.1	4.5	117	22,333	5.2
thon 28 25 24 22 27 34 33 35 30 37 41 38 228 43,40 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Sisaket	3.2	3.0	2.4	2.0	2.1	2.6	2.4	2.7	3.0	3.0	3.2	3.6	224	57,960	3.9
at all all all all all all all all all a	Sakolnakhon	2.8	2.5	2.4	2.2	2.7	3.4	ယ	3.5	3.0	3.7	4.1	3.8	228	43,240	.ω
day 5.6 4.9 5.1 6.0 5.7 5.2 7.6 6.4 6.8 7.5 7.0 12.6 12.49 ardkarn 3.3 2.4 4.5 6.2 6.8 6.2 6.8 6.2 5.7 7.1 12.69 onlythriam 3.3 2.4 4.5 3.9 2.7 4.1 5.7 5.1 6.2 5.5 6.2 5.5 8.3 9.3 9.4 45.260 alkhon 7.2 7.3 7.5 7.7 8.0 8.1 5.7 5.1 6.2 8.7 7.8 8.3 1.8 4.2 6.2 8.7 7.4 4.1 4.2	Songkhla	4.3	4.0	4.6	4.5	5.6	5.5		5.9	5.5	5.1	6.0	7.6	425	53,344	8.0
rakian 3.9 4.6 6.8 6.2 6.8 8.3 8.9 8.2 8.0 9.1 8.3 9.3 6.8 45.20 nnghriam 3.3 2.4 4.5 4.5 7.7 8.0 2.7 8.0 8.1 8.5 8.8 8.9 8.2 8.0 9.1 8.3 9.3 9.8 45.20 nnghriam 7.2 7.3 7.5 7.5 7.7 8.0 8.1 8.1 9.5 8.8 8.9 8.9 8.9 8.9 8.9 8.9 8.9 8.0 8.9 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0 8.0	Satun	4.9	5.6	4.9	5.1	6.0	5.7	5.2	7.6	6.4	6.8	7.5	7.0	126	12,469	10.1
ongkhram 33 24 45 39 27 41 57 51 62 55 47 61 41 624 akhon 7.2 7.3 7.5 7.7 80 8.1 55 8.8 8.9 8.7 7.8 83 186 19.26 akhon 7.2 7.3 3.8 3.6 4.7 4.4 5.4 5.5 6.8 6.3 5.8 7.4 19.26 akhon 7.2 7.3 3.2 4.7 5.4 5.5 5.8 6.8 6.3 5.8 7.4 19.26 3.4 7.4 7.2 5.1 4.7 5.5 5.1 8.1 6.8 6.7 6.8 6.7 6.2 2.2 2.28 3.1 4.1 4.7 4.5 4.8 5.7 6.4 6.9 6.4 6.8 6.7 6.5 6.3 19.9 29.278 3.1 2.1 2.2 2.2	Samut Prakan	3.9	4.6	6.8	6.2	6.8	8.3			8.0	9.1	တ ယ	9.3	368	45,260	8.1
akhon 7.2 7.3 7.5 7.7 8.0 8.1 9.5 8.8 8.9 8.7 7.8 8.3 19.26 akhon 7.2 7.3 7.5 7.7 8.0 8.1 9.5 8.8 8.9 8.7 7.8 8.3 186 19,226 4.0 3.3 3.8 3.6 4.7 4.4 5.4 5.5 6.8 6.3 5.8 7.4 131 20,827 i 5.4 7.8 7.4 7.2 5.1 4.7 5.5 5.1 4.7 8.0 8.8 9.3 5.2 2.2 2.286 i 6.3 5.4 7.2 5.5 5.1 4.7 4.0 6.2 4.8 5.7 6.4 6.9 6.1 7.3 6.2 4.9 5.3 1.93 2.2 1.9 2.2 8.2 9.6 6.8 6.7 6.3 1.93 2.2 8.2 8.3 4.1 4.1 4.0	Samut Songkhram	3.3	2.4	4.5	3.9	2.7	4.1		5.1	6.2	5.5	4.7	6.1	41	6,248	6.6
40 33 38 36 47 44 54 55 68 63 58 74 131 20,827 131 5.4 131 20,827 141 5.4 151 20,827 141 5.4 151 20,827 141 5.4 151 5.4 151 141 20,827 141 5.4 151 5.4 151 141 141 141 141 141 141 141 141 14	Samut Sakhon	7.2	7.3	7.5	7.7	8.0	8.1	9.5	8.8	8.9	8.7	7.8	8.3	186	19,226	9.7
64 7.8 7.4 5.7 9.4 7.4 7.9 7.3 8.7 8.0 8.6 9.3 222 22,896 63 5.4 7.2 5.1 4.7 5.5 5.1 8.1 8.1 8.8 9.4 7.0 47 6.621 riri 4.1 4.2 2.9 3.2 4.3 3.8 4.9 5.1 4.9 5.3 193 19,775 riri 4.1 4.7 4.5 4.8 5.7 6.4 6.9 6.4 6.9 8.6 6.7 6.5 6.3 199 29,278 riri 4.1 4.7 2.5 2.4 2.6 3.1 2.8 8.2 9.6 8.6 9.3 9.7 9.278 riri 2.7 3.2 2.9 3.7 3.8 3.1 2.8 3.2 4.1 4.1 5.0 369 38.9 4.9 9.2 3.2 4.1 4.1 5.0 4.	Sa Kaeo	4.0		ა. დ		4.7	4.4			6.8	6.3	5.8	7.4	131	20,827	ნ. ა
63 5.4 7.2 5.1 4.7 5.5 5.1 8.1 8.1 6.8 9.4 7.0 47 6.621 24 2.9 2.6 3.5 3.9 3.2 4.3 3.8 4.9 5.1 4.9 5.1 4.9 5.3 19.775 1 4.1 4.7 4.5 4.8 5.7 6.4 6.9 6.4 6.8 6.7 6.5 6.3 199 29.278 1 6.1 6.2 4.8 5.8 6.1 7.3 6.9 8.2 9.6 8.6 9.3 9.7 369 38.596 2 8 2.7 2.5 2.4 2.6 3.1 3.1 2.8 3.2 4.1 4.1 5.0 263 54.29 2 9 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.0 3.7 4.0 3.7 4.2 4.3 4.0 97 19.828 1 10 2.1 3.1 4.1 4.3 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 9.5 9.50 1 10 2.1 3.1 4.1 4.3 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 9.5 9.50 1 10 2.1 3.1 3.1 4.1 4.3 4.3 4.0 4.0 8.3 8.1 7.9 6.6 7.9 9.5 9.50 1 10 2.1 3.1 3.1 4.1 2.9 3.0 2.9 2.1 2.7 2.7 2.8 3.1 3.5 3.5 3.2 4.1 4.1 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5 3.5	Saraburi	5.4	7.8	7.4	5.7	9.4	7.4	7.9	7.3	8.7	8.0	8.6	9.3	222	22,896	9.7
2.4 2.9 2.6 3.5 3.9 3.2 4.3 3.8 4.9 5.1 4.9 5.3 123 19.775 ri 4.1 4.7 4.5 4.8 5.7 6.4 6.9 6.4 6.8 6.7 6.5 6.3 199 29.278 i 6.1 6.2 4.8 5.7 6.4 6.9 6.4 6.8 6.7 6.5 6.3 199 29.278 i 6.1 6.2 4.8 6.1 7.3 6.9 8.2 9.6 8.6 9.3 9.7 369 38.596 i 2.8 2.7 2.5 2.4 2.6 3.1 3.1 2.8 3.2 4.1 4.1 5.0 369 38.596 am Phu 2.1 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 4.0 97 19.828 roen 2.7 4.1 4.5 3.8 </th <th>Sing Buri</th> <th>6.3</th> <th></th> <th>7.2</th> <th>5.1</th> <th>4.7</th> <th>5.5</th> <th>5.1</th> <th>8.1</th> <th>8.1</th> <th>6.8</th> <th>9.4</th> <th>7.0</th> <th>47</th> <th>6,621</th> <th>7.1</th>	Sing Buri	6.3		7.2	5.1	4.7	5.5	5.1	8.1	8.1	6.8	9.4	7.0	47	6,621	7.1
ri 4.1 4.7 4.5 4.8 5.7 6.4 6.9 6.4 6.8 6.7 6.5 6.3 199 29,278 6.1 6.1 6.2 4.8 5.8 6.1 7.3 6.9 8.2 9.6 8.6 9.3 9.7 369 38,596 8.2 9.6 8.6 9.3 9.7 369 38,596 9.2 9.6 9.8 9.2 9.6 9.8 9.3 9.7 369 38,596 9.3 9.7 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.8 9.2 9.2 9.2 9.2 9.2 9.3 9.2 9.2 9.3 9.2 9.2 9.3 9.2 9.2 9.3 9.2 9.2 9.3 9.2 9.2 9.3 9.2 9.3 9.2 9.3 9.3 9.3 9.3 9.3 9.3 9.3 9.3 9.3 9.3	Sukhothai	2.4	2.9	2.6	3.5	3.9	3.2	4.3	3.8	4.9	5.1	4.9	5.3	123	19,775	6.2
i d.1 d.2 d.8 d.8 d.1 7.3 d.9 8.2 9.6 8.6 9.3 9.7 369 38.596 3.3 2.7 2.5 2.4 2.6 3.1 3.1 2.8 3.2 4.1 4.1 5.0 263 54.929 2.8 2.7 3.2 2.9 3.7 3.8 4.6 4.7 5.3 4.9 4.1 5.0 97 19.828 2.8 1.7 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19.751 2.7 4.1 4.8 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 95 9,600 2.7 4.1 4.8 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 95 9,600 2.8 3.5 3.5 3.6 3.8 4.3 4.0 4.2 2.7 2.7 2.7 2.8 3.1 3.5 3.5 3.6 1.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4.7 4	Suphan Buri	4.1	4.7	4.5	4.8	5.7	6.4	6.9	6.4	6.8	6.7	6.5	ნ .ა	199	29,278	6.8
3.3 2.7 2.5 2.4 2.6 3.1 3.1 2.8 3.2 4.1 4.1 5.0 263 54,929 2.8 2.7 3.2 2.9 3.7 3.8 3.7 4.0 3.7 4.2 4.3 4.0 97 19,828 2.m Phu 2.1 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19,751 2.m Phu 2.1 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19,751 1con 2.6 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.7 2.8 3.1 3.5 4.5 14,741 1 3.5 3.5 3.6 3.8 4.3 4.0 4.2 4.2 4.6 4.4 4.6 5.5 329 60,714 1 2.0 <	Surat Thani	6.1		4.8	5.8	6.1	7.3	6.9		9.6	8.6	9.3	9.7	369	38,596	9.6
2.8 2.7 3.2 2.9 3.7 3.8 3.7 4.0 3.7 4.2 4.3 4.0 97 19,828 am Phu 2.1 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19,751 roen 2.6 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.8 3.1 3.5 4.5 4.5 9.600 1 3.5 3.5 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.8 3.1 3.5 4.5 4.5 14,741 1 3.5 3.5 3.6 3.8 2.1 2.7 1.9 2.7 2.8 3.1 3.5 4.5 4.5 14,741 1 3.5 3.5 3.8 4.3 4.0 4.2 4.2 4.6 4.4 4.6 5.5 329 60,714 1 3.8 3.9 3.2 3.3 3.7 4.6 4.7 6.2 4.7 6.2	Surin	3.3	2.7	2.5	2.4	2.6	3.1	3.1	2.8	3.2	4.1	4.1	5.0	263	54,929	4.8
Jam Phu 2.1 3.1 4.1 4.5 3.8 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19.751 Jam 4.7 4.8 4.3 4.3 4.6 4.7 5.3 4.3 4.1 5.8 6.6 121 19.751 Icon 2.7 4.1 4.8 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 95 9,600 Icon 2.6 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.7 2.8 3.1 3.5 4.5 4.5 4.741 Icon 3.5 3.6 3.8 2.1 2.7 1.9 2.7 2.7 2.8 3.1 3.5 4.5 4.5 4.741 Icon 3.5 3.6 3.8 4.3 4.0 4.2 4.2 4.6 4.4 4.6 5.5 3.2 4.3 4.5 4.741 Icon 2.0 2.1 2.0 3.2 3.2 3.2 4.3 <t< th=""><th>Nong Khai</th><th>2.8</th><th>2.7</th><th></th><th></th><th>3.7</th><th>3.8</th><th>3.7</th><th>4.0</th><th>3.7</th><th>4.2</th><th>4.3</th><th>4.0</th><th>97</th><th>19,828</th><th>4.9</th></t<>	Nong Khai	2.8	2.7			3.7	3.8	3.7	4.0	3.7	4.2	4.3	4.0	97	19,828	4.9
2.7 4.1 4.8 4.3 4.3 6.1 6.4 8.3 8.1 7.9 6.6 7.9 9.60 2.6 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.8 3.1 3.5 4.5 4.5 14,741 3.5 3.5 3.6 3.8 4.3 4.0 4.2 4.2 4.6 4.4 4.6 5.5 329 60,714 2.0 2.0 2.4 1.4 2.9 3.0 2.9 2.1 2.6 3.2 3.2 4.3 66 15,047 3.8 3.9 3.2 3.3 3.7 4.6 4.7 4.0 5.6 5.2 4.7 6.2 81 11,233 2.9 3.3 2.9 3.5 3.6 3.3 3.5 3.3 3.7 3.8 4.5 43.4 4.5 4.7 4.0 4.0 5.6 5.2 4.7 6.2 81 11,233 74,	Nong Bua Lam Phu	2.1	3.1	4.1	4.5	3.8	4.6	4.7	5.3	4.3	4.1	5.8	6.6	121	19,751	6.1
2.6 3.6 4.2 2.8 2.1 2.7 1.9 2.7 2.8 3.1 3.5 45 14,741 3.5 3.5 3.6 3.8 4.3 4.0 4.2 4.6 4.4 4.6 5.5 329 60,714 2.0 2.0 2.4 1.4 2.9 3.0 2.9 2.1 2.6 3.2 3.2 4.3 66 15,047 3.8 3.9 3.2 3.3 3.7 4.6 4.7 4.0 5.2 4.7 6.2 81 11,233 2.9 3.3 2.9 3.5 3.6 3.3 3.5 3.3 3.7 3.8 4.5 4,34 4.9 4.9 4.0 </td <td>Ang Thong</td> <td>2.7</td> <td>4.1</td> <td>4.8</td> <td>4.3</td> <td>4.3</td> <td>6.1</td> <td>6.4</td> <td>8.3</td> <td>8.1</td> <td>7.9</td> <td>6.6</td> <td>7.9</td> <td>95</td> <td>9,600</td> <td>9.9</td>	Ang Thong	2.7	4.1	4.8	4.3	4.3	6.1	6.4	8.3	8.1	7.9	6.6	7.9	95	9,600	9.9
3.5 3.5 3.6 3.8 4.3 4.0 4.2 4.2 4.6 4.4 4.6 5.5 329 60,714 2.0 2.0 2.4 1.4 2.9 3.0 2.9 2.1 2.6 3.2 3.2 4.3 66 15,047 3.8 3.9 3.2 3.3 3.7 4.6 4.7 4.0 5.6 5.2 4.7 6.2 81 11,233 2.9 3.3 2.9 2.8 3.5 3.6 3.3 3.7 3.8 4.5 358 74,342	Amnat Charoen	2.6	3.6	4.2		2.1	2.7	1.9	2.7	2.7	2.8	<u>ω</u>	ω .5	45	14,741	<u></u>
2.0 2.0 2.4 1.4 2.9 3.0 2.9 2.1 2.6 3.2 3.2 4.3 66 15,047 3.8 3.9 3.2 3.3 3.7 4.6 4.7 4.0 5.6 5.2 4.7 6.2 81 11,233 2.9 3.3 2.9 2.8 3.5 3.6 3.3 3.5 3.3 3.7 3.8 4.5 358 74,342	Udon Thani	3.5	3.5	3.6		4.3	4.0	4.2	4.2	4.6	4.4	4.6	5.5	329	60,714	5.4
3.8 3.9 3.2 3.3 3.7 4.6 4.7 4.0 5.6 5.2 4.7 6.2 81 11,233 2.9 3.3 2.9 2.8 3.5 3.6 3.3 3.5 3.3 3.7 3.8 4.5 358 74,342	Uttaradit	2.0	2.0	2.4	1.4	2.9	3.0	2.9	2.1	2.6	3.2	3.2	4.3	66	15,047	4.4
2.9 3.3 2.9 2.8 3.5 3.6 3.3 3.5 3.3 3.7 3.8 4.5 358 74,342	Uthai Thani	3.8	3.9	3.2		3.7	4.6	4.7	4.0	5.6	5.2	4.7	6.2	82	11,233	7.2
	Ubon Ratchathani	2.9	3.3	2.9			3.6	3.3	3.5		3.7	3.8	4.5	358	74,342	4.8

Continue...

							Re	Repeat birth ratio: 1000	0001:0						
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Province 1-77	Ratio:1000	Ratio:1000 Ratio:1000 Ratio:1000 Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Ratio:1000	Repeat birth	No. of women aged 15-19	Repeat birth ratio: 1000
Total	4.0	4.1	4.4	4.3	4.9	5.3	5.6	5.6	2.7	2.7	2.7	6.3	15,440	2,404,152	6.4
Nationwide*	4.0	4.1	4.4	4.3	4.9	5.3	5.6	5.6	2.7	2.7	2.7	6.3			
Northern region	4.1	4.2	4.5	4.2	4.9	4.9	2.0	4.6	4.9	4.7	4.6	5.2	2,286	422,438	5.4
Northeastern region	2.9	2.9	3.0	2.7	3.2	3.5	3.4	3.6	3.6	3.9	4.0	4.7	4,169	830,385	5.0
Central region	4.8	5.0	5.7	5.8	6.7	7.4	7.9	7.9	8.0	8.0	7.5	8.1	6,305	788,300	8.0
Southern region	5.1	5.1	5.0	4.9	5.5	5.9	6.2	6.4	6.7	6.4	6.7	7.5	2,680	363,029	7.4

Source of information and indicator *Divided in the National Statistical Office of Thailand in line with information of the Office of National Economic and Social Development Board

Table 4: Delivery rate of women aged less than 15 years old per 1000 women aged 10-14 in 2000-2012

Professional Pro				9				1		9						
					D	elivery rate	of women a	aged less th	an 15: 1000	J				No. of childbirth given by women aged less than 15	No. of women aged 10-14 years (No. of female nonulation)	Delivery rate of women aged less than 15:1000
Mathematical Color Mathema	Province 1-77	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011		2012	
Principle 10.0 10	Krabi	0.7	0.8	1.2	1.1	1.1	0.9	0.9	1.4	1.6	0.9	1.6	1.5	31	16,707	1.9
In the 1	Bangkok	0.9	0.9	0.9	1.2	1.5	1.5	1.4	1.4	1.2	1.3	1.5	1.6	303	178,089	1.7
Primer 10.5	Kanchanaburi	0.8	1.3	0.9	1.0	1.7	1.5	2.0	1.8	2.0	2.2	1.7	2.2	72	27,093	2.7
Physic Color Col	Kalasin	0.3	0.5	0.5	0.3	0.4	0.7	0.6	0.6	0.9	0.9	<u>-</u>	1.2	43	31,398	1.4
Serial M. M. S. 102	Kamphaeng Phet	0.6	0.6	1.0	₫	1.5	1.8	1.3	1.6	1.4	1.6	2.3	2.2	57	23,217	2.5
Sevi III III III III III III III III III I	Khon Kaen	0.4	0.5	0.5	0.4	0.9	0.8	0.8	0.6	0.8	1.3	1.2	1.6	110	55,246	2.0
Sant May 1, 100 1,14 100 1,10 1,10 1,10 1,10 1,1	Chanthaburi	1.8	1.9	1.2	1.4	2.0	1.2	2.3	1.7	1.7	1.7	1.4	2.2	35	16,242	2.2
1.2 2.2 1.5 1.7 2.4 2.6 2.9 2.1 2.1 2.5 1.2	Chachoengsao	0.9	1.4	0.9	1.0	1.8	1.6	2.1	1.8	1.3	1.5	2.3	2.2	42	21,803	1.9
No. Color Color	Chon Buri	1.2	2.2	1.6	1.7	2.4	2.6	2.9	2.1	2.4	1.8	2.1	2.6	125	43,697	2.9
n	Chainat	0.7	0.6	0.9	0.6	2.0	1.3	1.7	2.0	1.7	1.8	2.7	1.5	16	9,132	1.8
Mathematical Color Mathema	Chaiyaphum	0.2	0.4	0.5	0.4	0.6	0.7	0.5	0.9	0.9	1.5	1.2	1.4	71	35,932	2.0
1.1 1.3 1.1 1.3 1.5 1.8 1.3 1.4 1.5 1.5 1.8 1.3 1.4 1.5	Chiang Rai	0.7	0.8	0.9	<u>.</u>	0.6	<u>-</u>	0.9	1.0	1.3	1.7	1.3	1.6	76	35,938	2.1
Mathematical Mat	Chiang Mai	<u>-</u>	1.3	<u>-</u>	1.3	1.5	1.8	<u>1</u> .3	1.4	1.6	1.5	1.6	2.1	102	46,210	2.2
10. 10. 10. 10. 10. 11. 13. 23. 11. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 11. 10. 10. 10. 11. 10.	Chumphon	0.6	0.4	0.6	0.6	1.4	0.5	0.8	1.3	<u> </u>	<u>-</u>	1.5	1.9	31	16,430	1.9
1.0 0.9 1.1 1.1 1.3 2.3 1.6 1.9 2.0 1.5 1.4 1.5 2.1 7.000 1.7 1.9 2.6 2.2 2.0 2.3 1.8 2.0 1.5 1.4 1.5 2.1 1.8 0.5 1.1 1.0 1.7 1.5 1.5 1.6 1.6 2.7 1.7 1.4 2.2 3.6 17 7.388 1.0 1.0 0.8 0.7 1.1 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 2.7 1.0 1.0 0.8 0.7 1.1 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.0 1.0 0.8 0.5 0.4 0.5 0.4 0.5 0.8 0.9 0.9 0.8 0.7 1.2 1.2 1.0 1.1 0.8 0.8 0.5 0.4 0.5 0.8 0.8 1.1 1.1 1.3 1.5 2.5 3.6 1.0 1.1 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.7 1.2 1.2 1.2 1.0 1.1 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 0.8 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	Trang	0.4	0.4	0.5	0.3	11	0.5	<u>-</u> 1	0.7	0.9	1.0	0.6	1.4	30	22,505	<u></u>
	Trad	1.0	0.9	<u>-</u>	<u>.</u>	1.3	2.3	1.6	1.9	2.0	1.5	1.4	1.5	21	7,030	3.0
yok 0.5 1.1 1.0 1.7 1.5 1.6 1.7 1.5 1.6 2.7 1.7 1.7 1.5 1.6 2.7 1.7 1.7 1.5 1.6 2.7 1.7 1.7 1.7 1.5 1.6 2.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1.7 1	Tak	1.7	1.9	2.6	2.2	2.2	2.0	2.0	2.3	1.8	2.0	2.3	2.2	56	21,629	2.6
holm 0.6 0.8 0.7 11 1.6 1.6 1.3 1.6 1.5 1.4 1.5 21 48 28.47 Chiasimia 0.5 0.6 0.4 0.5 0.5 0.4 0.6 0.6 0.6 0.8 0.8 0.7 1.2 1.2 1.3 1.5 1.4 1.5 2.1 1.3 1.5 2.1 1.3 1.5 2.1 1.3 1.5 2.1 1.3 1.5 2.1 1.3 1.5 2.1 1.3 1.5 2.1 1.3 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	Nakhon Nayok	0.5	≟	1.0	1.7	1.5	1.6	1.6	2.7	1.7	1.4	2.2	3.6	17	7,388	2.3
boom 0.03 0.4 0.6 0.5 0.4 0.6 0.5 0.4 0.6 0.8 0.9 0.9 0.8 0.7 1.3 39 25,886 transima 0.5 0.6 0.4 0.6 0.5 0.4 0.6 0.5 0.8 0.7 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.2 1.2	Nakhon Pathom	0.6	0.8	0.7	<u>:</u>	1.6	1.6	1.3	1.6	1.5	1.4	1.5	2.1	48	26,417	1.8
Cobasima 0.5 0.6 0.4 0.6 0.6 1.0 0.8 0.8 1.1 1.1 1.3 1.5 151 88.387 Cobasima 0.5 0.6 0.6 0.4 0.6 0.6 1.0 0.8 0.8 1.1 1.1 1.3 1.5 1.5 1.5 8.387 Cobasima 0.7 0.8 0.8 0.8 0.6 1.3 1.7 1.5 0.5 0.8 0.7 0.7 1.2 1.2 1.2 59 Cobasima 0.7 0.8 0.8 0.8 0.6 1.3 1.7 1.5 2.1 1.1 1.1 1.9 1.5 1.5 59 Cobasima 0.7 0.8 0.8 0.8 0.6 1.3 1.7 1.5 2.1 1.1 1.1 1.1 1.9 1.5 1.5 59 Cobasima 0.7 0.8 0.8 0.8 0.8 1.3 1.8 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1 1.1	Nakhon Panom	0.3	0.4	0.6	0.5	0.4	0.6	0.6	0.9	0.9	0.8	0.7	1.3	39	25,886	1.5
van 0.2 0.2 0.3 0.5 0.4 0.5 0.8 0.7 0.8 0.9 52.06 van 0.7 0.8 0.8 0.6 1.3 1.7 1.5 2.1 2.1 1.9 2.3 2.5 80 31,741 van 0.6 1.0 0.8 1.3 1.8 1.1 1.1 1.1 1.4 1.6 1.8 67 33,679 0.6 0.7 1.1 0.7 0.8 0.9 0.8 0.6 0.6 0.6 0.9 0.9 33,477 0.1 0.7 1.1 0.7 0.8 0.9 0.8 0.6 0.5 0.8 0.1 0.9 0.9 33,477 1.1 0.7 1.1 1.3 1.9 1.3 1.0 1.0 1.0 1.3 3.2 1.4 1.3 3.2 1.4 1.4 1.6 0.0 55.774 1.1 1.1 1.9 1.5 1.	Nakhon Ratchasima	0.5	0.6	0.4	0.6	0.6	1.0	0.8	0.8	<u>=</u>	<u>-</u> 1	1 .3	1.5	151	83,387	1.8
wan 0.7 0.8 0.8 0.6 1.3 1.7 1.5 2.1 1.9 2.3 2.5 80 31,44 0.6 1.0 0.8 1.3 1.8 1.1 1.1 1.1 1.1 1.4 1.6 1.8 67 33,679 1.2 1.0 1.1 0.7 0.8 0.9 0.8 0.6 0.6 0.9 26 33,679 1.2 1.0 1.1 0.7 0.8 0.9 0.8 0.6 0.9 0.9 26 33,477 1.2 1.0 0.1 0.7 0.8 0.9 0.8 0.0 0.9 0.9 26 14015 1.0 0.4 0.5 0.5 0.5 0.6 0.7 0.8 1.0 1.0 1.1 9 14015 1.0 0.6 1.3 1.1 2.0 1.3 1.0 1.1 1.9 1.1 1.4 4.0 9 32,027	Nakhon Sri Thammarat	0.2	0.2	0.3	0.5	0.4	0.5	0.5	0.8	0.7	0.7	1.2	1.2	59	52,206	11
0.6 1.0 0.8 1.3 1.8 1.1 1.1 1.1 1.1 1.4 1.6 1.8 67 33.679 1.2 1.0 1.1 0.7 0.8 0.9 0.8 0.6 0.5 0.6 0.5 0.6 0.9 26 33.477 1.2 1.0 1.1 0.7 0.8 0.9 0.8 0.6 0.5 0.6 0.5 0.6 0.9 26 33.477 1.2 1.1 0.6 0.7 0.8 0.9 0.8 0.6 0.5 0.6 0.5 0.6 0.9 26 33.477 1.3 1.1 0.6 0.7 0.8 0.5 0.6 0.7 0.8 1.0 1.0 1.1 1.3 32 1.1 0.6 1.3 1.7 1.1 1.3 1.9 1.3 1.0 1.6 1.6 1.6 1.4 1.4 1.6 1.8 1.8 1.8 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4 1.4	Nakhon Sawan	0.7	0.8	0.8	0.6	1.3	1.7	1.5	2.1	2.1	1.9	2.3	2.5	80	31,741	2.5
1.2 1.0 1.1 0.7 0.8 0.9 0.8 0.6 0.6 0.6 0.9 26 33.477 1.0 0.6 0.7 1.1 0.6 0.7 0.8 0.9 0.8 0.6 0.6 0.6 0.9 26 14.015 1.0 0.7 1.1 0.6 0.7 0.8 0.9 0.8 0.6 0.6 0.9 0.9 26 14.015 1.0 0.4 0.5 0.5 0.5 0.5 0.5 0.5 0.7 0.9 1.3 1.0 1.0 1.0 1.0 1.3 32 14.75 1.0 0.6 1.3 1.7 1.1 1.3 1.9 1.3 1.0 1.0 1.6 1.6 1.6 1.4 1.4 60 32.027 1.0 0.7 0.6 1.0 1.1 2.0 1.3 1.4 2.0 1.5 1.5 1.5 28 15.5 1.0 0.8 0.7 0.9 0.6 0.5 0.5 0.5 0.5 0.4 0.6 0.6 0.6 0.6 0.6 0.9 0.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1.9 1	Nonthaburi	0.6	1.0	0.8	1.3	1.8	11	1	<u>.</u>	1	1.4	1.6	1.8	67	33,679	2.0
0.6 0.7 1.1 0.6 0.7 0.8 0.8 0.6 0.5 0.8 1.0 1.1 9 14,015	Narathiwat	1.2	1.0	<u>-</u>	0.7	0.8	0.9	0.8	0.6	0.6	0.6	0.6	0.9	26	33,477	0.8
14.75 15. 1.7	Nan	0.6	0.7	<u>-1</u>	0.6	0.7	0.8	0.8	0.6	0.5	0.8	1.0	<u>.</u>	9	14,015	0.6
0.4 0.5 0.5 0.5 0.5 0.6 0.7 0.8 1.0 1.0 1.0 1.3 93 55,774 niri 0.6 1.3 1.7 1.1 1.3 1.9 1.3 1.0 1.6 1.4 1.4 60 32,027 hiri 0.6 1.3 1.1 0.9 1.3 1.9 1.0 1.6 1.4 1.4 60 32,027 b 0.7 0.6 1.1 2.0 1.3 1.0 1.6 1.4 1.4 60 32,027 b 0.7 0.6 0.5 0.5 0.5 0.2 2.1 1.9 1.5 1.5 28 15,155 b 0.7 0.9 0.6 0.5 0.5 0.4 0.6 0.6 0.5 0.5 1.4 2.9 1.5 1.5 1.5 2.1 1.6 4.9 23,404 4.0 4.0 4.0 4.0 4.0 4.0	Bueng Kan	1	ı	1	ı	ı	ı		1	ı	1	1	1.3	32	14,775	2.2
Thani 0.6 1.3 1.7 1.1 1.3 1.9 1.3 1.0 1.6 1.6 1.4 1.4 60 32,027 ppKhiri 0.6 1.3 1.1 0.9 1.3 2.0 2.0 3.0 2.2 2.1 2.4 2.9 56 16,432 buri b 0.7 0.6 1.0 1.1 2.0 1.3 1.4 2.0 1.1 1.9 1.5 2.8 15.5 28 15,155 buri b 0.7 0.6 1.0 1.1 2.0 1.3 2.0 1.1 1.9 1.5 1.5 2.8 1.5 2.8 1.5 2.8 1.5 2.8 1.5 2.8 1.5 2.1 1.1 1.9 2.1 1.6 4.9 23,444 2.0 2.1 1.6 4.9 12,899 12,899 1.2 1.1 1.0 0.5 0.5 1.6 1.0 1.7 1.1 1.2 0.9 0.5 <td>Buri Ram</td> <td>0.4</td> <td>0.5</td> <td>0.5</td> <td>0.5</td> <td>0.5</td> <td>0.6</td> <td>0.7</td> <td>0.8</td> <td>1.0</td> <td>1.0</td> <td>1.0</td> <td>1.3</td> <td>93</td> <td>55,774</td> <td>1.7</td>	Buri Ram	0.4	0.5	0.5	0.5	0.5	0.6	0.7	0.8	1.0	1.0	1.0	1.3	93	55,774	1.7
tpkhiri 0.6 1.3 1.1 0.9 1.3 2.0 2.0 3.0 2.2 2.1 2.4 2.9 56 16,432 buri b 0.7 0.6 1.0 1.1 2.0 1.3 1.4 2.0 1.1 1.9 1.5 1.5 2.8 15,155 buri b 0.7 0.6 0.5 0.5 0.5 0.4 2.0 1.1 1.9 1.5 1.5 2.8 15,155 buri b 0.7 0.6 0.5 0.5 0.4 0.6 0.6 0.5 0.7 1.1 1.9 1.1 1.9 1.1 1.9 2.1 1.6 4.9 23,484 2.0 1.2 0.7 0.7 0.7 0.7 0.1 1.1 1.4 9 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899 12,899	Pathum Thani	0.6	1.3	1.7	11	1.3	1.9	1.3	1.0	1.6	1.6	1.4	1.4	60	32,027	1.9
burib 0.7 0.6 1.0 1.1 2.0 1.3 1.4 2.0 1.1 1.9 1.5 1.5 28 15,155 burib 0.7 0.8 0.7 0.9 0.6 0.5 0.4 0.6 0.6 0.5 0.9 0.6 15,155 ya 0.3 0.5 0.7 1.0 1.3 2.0 1.5 1.7 1.1 1.9 2.1 1.6 49 23,484 ya 0.3 0.5 0.7 1.0 0.7 0.7 0.7 0.9 0.7 1.1 1.4 9 23,484 ya 0.4 0.2 0.3 0.2 0.5 0.7 0.7 0.9 0.7 1.1 1.4 9 12,899 vga 0.4 0.2 0.3 0.4 0.4 0.4 1.0 0.5 0.9 1.5 1.0 1.7 1.4 9 12,834 vga 0.4 0.4	Prachuap Khiri Khan	0.6	1.3	<u></u>	0.9	1.3	2.0	2.0	3.0	2.2	2.1	2.4	2.9	56	16,432	3.4
1.0 0.8 0.7 0.9 0.6 0.5 0.4 0.6 0.5 0.5 0.4 0.6 0.5 0.5 0.9 0.6 0.5 0.4 0.6 0.5 0.5 0.4 0.6 0.5 0.5 0.9 0.6 0.5 0.9 0.6 0.5 0.9 0.7 1.1 1.9 2.1 1.6 49 23,484 ya 0.4 0.3 0.2 0.2 0.5 0.7 0.7 0.7 0.9 0.7 1.1 1.9 2.1 1.6 49 23,484 ya 0.4 0.3 0.2 0.2 0.5 0.7 0.7 0.7 0.9 0.7 1.1 1.9 2.1 1.6 49 23,484 ya 0.4 0.2 0.3 0.4 0.7 0.5 0.9 0.5 1.6 1.0 1.7 1.4 9 12,899 ya 0.1 0.3 0.2 0.3 0.4 0.4 0.4 1.0 0.6 0.8 0.6 0.9 1.7 14 8,834 ya 0.4 0.4 0.4 0.4 0.4 0.6 0.8 0.6 0.9 1.7	Prachinburi b	0.7	0.6	1.0	<u>:</u>	2.0	1.3	1.4	2.0	<u>:</u>	1.9	1.5	1.5	28	15,155	1.9
ya 0.3 0.5 0.7 1.0 1.3 2.0 1.5 1.7 1.1 1.9 2.1 1.6 49 23,484 ya 0.4 0.3 0.2 0.2 0.5 0.7 0.7 0.7 0.9 0.7 1.1 1.4 9 12,899 uga 0.4 0.2 0.3 0.3 1.4 0.7 0.5 0.9 0.5 1.6 1.0 1.7 1.1 1.4 9 12,899 12,899 10 1.0 1.0 1.1 1.4 9 12,899 12,899 1.0 1.0 1.0 1.0 1.0 1.0 1.1 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 1.0 1.0 1.0 1.1 1.2 1.0 1	Pattani	1.0	0.8	0.7	0.9	0.6	0.5	0.5	0.4	0.6	0.6	0.5	0.5	19	30,406	0.6
0.4 0.3 0.2 0.2 0.5 0.7 0.7 0.9 0.7 1.1 1.4 9 12,899 lya 0.4 0.2 0.3 0.3 1.4 0.7 0.5 0.9 0.5 1.6 1.0 1.7 14 8,834 lung 0.1 0.3 0.2 0.3 0.4 0.4 0.4 1.0 0.6 0.8 0.6 0.9 17 14 8,834 lung 0.1 0.3 0.2 0.3 0.4 0.4 0.4 1.0 0.6 0.8 0.6 0.9 17 14 8,834 lung 0.4 0.4 0.4 0.4 1.0 0.6 0.8 0.6 0.9 17 14 1.6,417 lung 0.4 0.4 0.5 0.7 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 lung 0.5 0.7 1.2 1.3 1.5 2.5 1.3 1.9 2.0 23 41 16,559	Ayutthaya	0.3	0.5	0.7	1.0	1.3	2.0	1.5	1.7	<u>-</u>	1.9	2.1	1.6	49	23,484	2.1
tiga 0.4 0.2 0.3 0.3 1.4 0.7 0.5 0.9 0.5 1.6 1.0 1.7 14 8,834 lung 0.1 0.3 0.2 0.3 0.4 0.4 0.4 1.0 0.6 0.8 0.6 0.9 17 16,417 ulok 0.4 0.4 0.5 0.7 1.1 1.0 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 ulok 0.5 0.7 1.2 0.6 1.2 1.0 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 ulok 0.5 0.7 1.2 1.1 1.2 1.0 1.5 1.5 1.6 2.4 40 25,280 bund 0.2 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 2.5 1.3 1.5 50 31,418	Phayao	0.4	0.3	0.2	0.2	0.5	0.7	0.7	0.7	0.9	0.7	<u>-</u>	1.4	9	12,899	0.7
lung 0.1 0.3 0.2 0.3 0.4 0.4 0.4 0.0 0.6 0.8 0.6 0.9 17 16,417 0.4 0.4 0.4 0.4 0.0 0.6 0.8 0.6 0.9 17 16,17 ulok 0.5 0.7 1.2 0.6 1.2 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 ulok 0.5 0.7 1.2 1.1 1.2 1.0 1.6 1.5 1.6 2.4 40 25,280 buri 0.6 0.3 1.0 0.7 1.2 1.3 1.5 2.5 1.3 1.9 3.0 46 14,181 bun 0.2 0.4 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 50 31,418	Phang Nga	0.4	0.2	0.3	0.3	1.4	0.7	0.5	0.9	0.5	1.6	1.0	1.7	14	8,834	1.6
0.4 0.4 0.5 0.7 1.1 1.0 1.1 1.2 0.9 1.9 2.0 2.3 41 16,559 ulok 0.5 0.7 1.2 0.6 1.2 1.1 1.2 1.0 1.6 1.5 1.6 2.4 40 25,280 buri 0.6 0.3 1.0 0.7 1.2 1.3 1.5 2.5 1.3 1.9 3.0 46 14,181 bun 0.2 0.4 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 50 31,418	Phatthalung	0.1	0.3	0.2	0.3	0.4	0.4	0.4	1.0	0.6	0.8	0.6	0.9	17	16,417	1.0
0.5 0.7 1.2 0.6 1.2 1.1 1.2 1.0 1.6 1.5 1.6 2.4 40 25,280 0.6 0.3 1.0 0.7 1.2 1.2 1.3 1.5 2.5 1.3 1.9 3.0 46 14,181 0.2 0.4 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 50 31,418	Phichit	0.4	0.4	0.5	0.7	1.1	1.0	<u>:</u>	1.2	0.9	1.9	2.0	2.3	41	16,559	2.5
0.6 0.3 1.0 0.7 1.2 1.2 1.3 1.5 2.5 1.3 1.9 3.0 46 14,181 0.2 0.4 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 50 31,418	Phitsanulok	0.5	0.7	1.2	0.6	1.2	1.1	1.2	1.0	1.6	1.5	1.6	2.4	40	25,280	1.6
0.2 0.4 0.4 0.6 0.8 0.8 1.2 0.7 1.1 1.2 1.3 1.5 50 31,418	Phetchaburi	0.6	0.3	1.0	0.7	1.2	1.2	1.3	1.5	2.5	1 .3	1.9	3.0	46	14,181	3.2
	Phetchabun	0.2	0.4	0.4	0.6	0.8	0.8	1.2	0.7	<u>-</u>	1.2	1.3	1.5	50	31,418	1.6

Delivery rate of women aged less than 15: 1000 8. 1.2 No. of women aged 10-14 years (No. of female population) 6,659 21,850 25,624 22,635 10,045 19,299 51,554 39,677 49,418 11,812 39,511 5,560 16,368 18,829 19,557 17,226 24,852 17,928 11,821 9,673 21,831 42,093 34,561 2,096,028 12,741 No. of childbirth given by women aged less than 15 year old 3,725
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Source: Bureau of Policy and Strategy, Ministry of Public Health

Table 5: Ratio of 15-19 year-old adolescent girls seeking medical care for complications associated with abortion and miscarriage in 2011

	No. of adolescent girls aged 15-19	No. of adolescent girls, aged 15-19, receiving health service for complications associated with abortion and miscarriage	Ratio of adolescents aged 15-19 seeking health service for complications associated with abortion/miscarriage (per 1,000)
Krabi	17,694	131	7.4
Bangkok	208,090	647	3.1
Kanchanaburi	30,908	134	4.3
Kalasin	37,386	156	4.2
Kamphaeng Phet	26,551	137	5.2
Khon Kaen	67,292	313	4.7
Chanthaburi	19,223	101	5.3
Chachoengsao	24,667	89	3.6
Chon Buri	47,999	196	4.1
Chainat	10,995	47	4.3
Chaiyaphum	41,234	211	5.1
Chumphon	18,146	112	6.2
		128	2.8
Chiang Rai	45,086		
Chiang Mai	60,609	223	3.7
Trang -	25,464	150	5.9
Trad	8,316	43	5.2
Tak	21,522	135	6.3
Nakhon Nayok	8,891	28	3.1
Nakhon Pathom	33,011	128	3.9
Nakhon Panom	27,069	116	4.3
Nakhon Ratchasima	94,032	428	4.6
Nakhon Sri Thammarat	57,907	316	5.5
Nakhon Sawan	37,375	206	5.5
Nonthaburi	37,908	140	3.7
Narathiwat	34,086	107	3.1
Nan	17,573	50	2.8
Buri Ram	62,110	269	4.3
Pathum Thani	37,444	95	2.5
Prachuap Khiri Khan	18,246	147	8.1
Prachinburi	16,963	96	5.7
Pattani	30,948	62	2.0
Ayutthaya	27,029	125	4.6
Phayao	19,221	59	3.1
Phang Nga	9,251	63	6.8
Phatthalung	19,154	111	5.8
Phichit	18,351	54	2.9
Phitsanulok	32,631	221	6.8
Phetchaburi	16,212	79	4.9
Phetchabun	35,022	144	4.1
Phrae	15,773	42	2.7
Phuket	14,276	82	5.7
Mahasarakham	35,756	144	4.0
Mukdahan	13,431	39	2.9
Mae Hong Son	10,864	44	4.1
Yasothon	19,985	77	3.9
Yala	23,159	81	3.5
Roi Et	50,208	235	4.7
Ranong	7,177	30	4.2
Rayong	23,217	128	5.5
Ratchaburi			3.8
	30,058	113	
Lopburi	25,652	116	4.5
Lampang	26,127	130	5.0
Lamphun	13,457	48	3.6
Loei	22,656	146	6.4
Sisaket	58,020	216	3.7
Sakolnakhon	43,645	217	5.0
Songkhla	53,314	268	5.0
Satun	12,455	58	4.7
Samut Prakan	44,139	173	3.9

	No. of adolescent girls aged 15-19	No. of adolescent girls, aged 15-19, receiving health service for complications	Ratio of adolescents aged 15-19 seeking health service for complications associated with abortion/miscarriage (per
		asssociated with abortion and miscarriage	1,000)
Samut Sakhon	19,054	54	2.8
Sa Kaeo	21,009	102	4.9
Saraburi	22,884	125	5.5
Sing Buri	6,725	22	3.3
Sukhothai	19,805	125	6.3
Suphan Buri	29,150	139	4.8
Surat Thani	38,145	293	7.7
Surin	55,318	216	3.9
Nong khai	43,071	162	3.8
Nong Bua Lam Phu	19,839	131	6.6
Ang Thong	9,592	35	3.6
Ammat Charoen	15,007	55	3.7
Udon Thani	61,022	267	4.4
Uttaradit	15,043	87	5.8
Uthai Thani	11,271	67	5.9
Ubon Ratchathani	74,905	276	3.7
Nationwide*	2,413,063	10,564	4.4
Northen region	426,281	1,900	4.5
Northeastern region	841,986	3,674	4.4
Central region	783,620	3,126	4.0
Southern region	361,176	1,864	5.2
Total	2,413,063	10,564	4.4

Source: Public Health Ministry and Interior Ministry

Table 6: No. and percentage of marriage and education among female adolescents in 2010

	N	o. of populatio	n		Educ	cation			Mar	riage	
Province 1-77	No. of women aged 13-14	No. of women aged 12-17	No. of women aged 15-19	No. of women aged 12-17 who are not studying	No. of women aged 12-17 who have no education	Percentage of women aged 12-17 who are not studying	Percentage of women aged 12- 17 who have no education	No. of women aged 13-14 who used to be married	No. of women aged 15-19 who used to be married	No. of women aged 13-14 who used to be married	Percentage of women aged 15-19 who used to be married
Krabi	5895	16712	13051	2310	34	13.8	0.2	97	2312	1.6	17.7
Bangkok	86,225	268,743	286,186	62,468	643	23.2	0.2	1,318	28,602	1.5	10.0
Kanchanaburi	13207	37665	29486	5082	176	13.5	0.5	140	4817	1.1	16.3
Kalasin	15172	43009	30802	3373	17	7.8	0.0	103	3803	0.7	12.3
Kamphaeng Phet	13769	39107	28983	3752	179	9.6	0.5	224	5243	1.6	18.1
Khon Kaen	28968	83605	72086	576	44	0.7	0.1	737	7857	2.5	10.9
Chanthaburi	7106	20910	17923	2614	359	12.5	1.7	133	3309	1.9	18.5
Chachoengsao	10457	30403	25290	3292	188	10.8	0.6	149	3762	1.4	14.9
Chon Buri	18624	55037	58768	6860	635	12.5	1.2	545	7291	2.9	12.4
Chainat	4557	13168	10079	1331	19	10.1	0.1	101	2059	2.2	20.4
Chaiyaphum	17142	48014	32338	4	11	0.0	0.0	290	5454	1.7	16.9
Chumphon	7166	20396	16201	2658	563	13.0	2.8	83	2915	1.2	18.0
Chiang Rai	18537	53088	41992	5686	596	10.7	1.1	280	5293	1.5	12.6
Chiang Mai	23222	68676	70353	7491	959	10.9	1.4	589	7959	2.5	11.3
Trang	10102	29229	23332	3246	43	11.1	0.1	142	2978	1.4	12.8
Trad	3760	11328	8971	2249	629	19.9	5.6	61	1537	1.6	17.1
Tak	9548	27632	21700	5291	1239	19.1	4.5	198	4011	2.1	18.5
Nakhon Nayok	3582	10612	11081	1319	38	12.4	0.4	70	1515	2.0	13.7
Nakhon Pathom	13088	38919	39881	4225	397	10.9	1.0	93	4821	0.7	12.1
Nakhon Phanom	11070	31031	21328	3187	87	10.3	0.3	123	2871	1.1	13.5
Nakhon Ratchasima	42007	119391	94575	10840	78	9.1	0.1	1152	14887	2.7	15.7
Nakhon Sri Thammarat		68973	55085	14632	34	21.2	0.0	251	5967	1.1	10.8
Nakhon Sawan	15597	44016	34562	4459	43	10.1	0.1	234	5854	1.5	16.9
Nonthaburi	15594	46204	42699	4876	272	10.6	0.6	242	3632	1.6	8.5
Narathiwat	14142	40609	30702	4105	8	10.1	0.0	115	3040	0.8	9.9
Nan	8361	22927	15185	1384	13	6.0	0.1	117	1762	1.4	11.6
Buri Ram	26142	71192	47637	839	102	1.2	0.1	532	8318	2.0	17.5
Pathum Thani	13088	38919	39881	4225	397	10.9	1.0	93	4821	0.7	12.1
Prachuap Khiri Khan	7109	20232	16034	3212	278	15.9	1.4	150	3466	2.1	21.6
Prachinburi Prachinburi	8296	23858	19249	2507	73	10.5	0.3	249	3100	3.0	16.1
Pattani	16577	39767	38953	4376	81	11.0	0.2	91	2204	0.5	5.7
Ayutthaya	10108	30977	27645	2427	59	7.8	0.2	119	3731	1.2	13.5
Phayao	6852	19183	15537	1024	28	5.3	0.1	81	1446	1.2	9.3
Phang Nga	3882	11426	8588	687	337	6.0	2.9	76	1736	2.0	20.2
Phatthalung	8753	24424	20871	2234	86	9.1	0.4	130	2404	1.5	11.5
Phichit	9273	25486	17443	3344	2	13.1	0.0	149	3158	1.6	18.1
Phitsanulok	14621	41235	38331	3418	77	8.3	0.0	154	5138	1.1	13.4
Phetchaburi Phetchaburi	6762	19855	17454	2401	107	12.1	0.5	109	2567	1.6	14.7
Phetchabun	15983	44686	31792	4503	15	10.1	0.0	412	4988	2.6	15.7
Phrae	6711	19258	14314	974	18	5.1	0.0	68	1274	1.0	8.9
Phuket	7042	20428	19636	2006	111	9.8	0.1	81	2365	1.2	12.0
Maharasakham	14644	41603	36083	2485	4	6.0	0.0	226	3486	1.5	9.7
Mukdahan	7205	20198	13802	1591	46	7.9	0.0	79	1773	1.5	12.8
Mae Hong Son	4423							47			
Yasothon	9376	12056 26018	8299 17390	1758 1831	178 8	14.6 7.0	1.5 0.0	162	1274 2393	1.1 1.7	15.4 13.8
	8777										
Yala Roj Et		25094	19978	2208	12 15	8.8	0.0	136	1870 4852	1.5	9.4
Roi Et	21849	60779	40138	3089	15	5.1	0.0	138		0.6	12.1
Ranong	4055	11669	10103	2861	1118	24.5	9.6	24	1890	0.6	18.7
Rayong	11345	33150	28444	4588	728	13.8	2.2	134	5818	1.2	20.5
Nationwide*	1,019,465	2,938,299	2,435,784	317,253	16,117	10.8	0.5	16,531	325,494	1.6	13.4
Northern region	185,886	528,169	420,425	52,279	3,589	9.9	0.7	3,085	58,805	1.7	14.0
Northeastern region	352,781	992,957	729,314	64,679	767	6.5	0.1	6,067	100,763	1.7	13.8
Central region	244,568	715,061	642,223	79,416	7,862	11.1	1.1	4,268	94,307	1.7	14.7
Southern region	150,005	433,370	357,636	58,411	3,256	13.5	0.8	1,793	43,016	1.2	12.0

Source: National Population and Housing Census, National Statistical Office of Thailand 2010

Adolescent-Friendly Sexual and Reproductive Health Service Checklist

Adolescent friendly service should be friendly, accessible and appropriate for adolescents, both male and female. The following table provides an example of adolescent friendly sexual and reproductive health service checklist.

(Adapted from African Youth Alliance/Pathfinder International)

Characte	ristics	Failing	Must improve	Average	Good	Excellent	Feasible suggestions for improvement
				•••	\odot	<u> </u>	
Health F	acilities Characteristics						
1	Is the facility located near a place where adolescents – both female and male – congregate? (youth centre, school, market, etc.)						
2	Is the facility open during hours that are convenient for adolescents – both female and male (particularly in the evenings or at the weekend)?						
3	Are there specific clinic times or spaces set aside for adolescents?						
4	Are RH Services offered for free, or at rates affordable to adolescents?						
5	Are waiting time short?						
6	If both adults and adolescents are treated in the facility, is there a separate, discreet entrance for adolescents to ensure their privacy?						
7	Do counseling and treatment rooms allow for privacy (both visual and auditory?)						
8	Is there a Code of Conduct in place for staff at the health facility?						
9	Is there a transparent, confidential mechanism for adolescents to submit complaints or feedback about SRH services at the facility?						
Provider	Characteristics						
1	Have providers been trained to provide adolescent-friendly services?						
2	Have all staff been oriented to providing confidential adolescent-friendly services? (receptionists, security guards, cleaners, etc.)						
3	Do the staff demonstrate respect when interacting with adolescents?						
4	Do the providers ensure the clients' privacy and confidentiality?						
5	Do the providers set aside sufficient time for client-provider interaction?						
6	Are peer educators or peer counselors available?						
7	Are health providers assessed using quality standard checklist?						
Program	Characteristics						
1	Do adolescents (female and male) play a role in the operation of the health facility?						
2	Are adolescents involved in monitoring the quality of SRH service provision?						
3	Can adolescents be seen in the facility without the consent of their parents or spouses?						
4	Is a wide range of RH services available? (FP, STI treatment and prevention, HIV counseling and testing, ante-and post-natal care, delivery care)						
5	Are there written guidelines for providing adolescent services?						
6	Are condoms available to both young men and young women?						
7	Are there RH educational materials, posts or job aids on sit, which are designed to adolescents?						
8	Are referral mechanisms in place? (for medical emergencies for mental health and psychosocial support, etc)						
9	Are adolescent-specific indicators monitored on a regular basis? (e.g. number of adolescent clients, disaggregated by age and sex)						





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