
OBSTETRICS

Thailand Adolescent Birth Rate: Trend and Related Indicators

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ABSTRACT

Objectives: To describe trend of adolescent birth rate and related indicators in Thai population.

Material and Method: Three national and international secondary databases were used. The data was described by descriptive statistics in term of number, rate and proportion.

Results: According to Thailand Public Health Statistics, Thailand adolescent birth rate decreased from 42.2 per 1,000 women aged 15-19 in 1990 to meet the lowest rate of 31.1 in the year 2000. After that, the adolescent birth rate has steadily increased. The latest data in 2012 shows that Thailand adolescent birth rate is 53.8 per 1,000 women aged 15-19. There are some discrepancies between adolescent birth rate reported by Thailand Public Health Statistics and the 2012 update for MDG database because of different calculation methods.

Conclusions: Thailand adolescent birth rate is still in the increasing trend.

Keywords: adolescent birth rate, Thailand, adolescent pregnancy

Introduction

Adolescence is defined by the World Health Organization (WHO) as the period between ages 10 and 19 years⁽¹⁾, and it is an important life period in which the future patterns of each adolescent is established. There are many concerns about adolescents in Reproductive Health issues, i.e. early engage into sexual intercourse, unsafe sex, coerced sex, unintended pregnancy and unsafe abortion. Among these conditions, pregnancy and childbearing can obviously change a life course of teenage mothers forever. Adolescent pregnancy is a complex of social, health and cultural issues. The global trend of earlier menarche, which results in a longer adolescent period and a longer schooling period, has made both boys and girls less dependent on parents and families. This has

led to more premarital sexual relations and increasing numbers of teenage pregnancies.

The problem of adolescent pregnancy is paid attention to by many countries and organizations. The term teenage or adolescent pregnancy means pregnancy in a woman aged 10-19 years. The age of a woman is defined at the time of delivery. Considering the different impacts on birth outcomes, some authors distinguish between adolescent aged 15-19 years and younger adolescent aged 10-14 years. To compare the incidence between countries, the most often used statistics are birth rates and pregnancy rates per 1,000 adolescents aged 15–19 years. However, data on induced abortion and pregnancy rate are reliable only in developed countries with legally induced abortions services⁽²⁾. In other countries, in which induced abortion

is illegal, pregnancy rates are often based on rough estimation and are difficult to compare between countries.

Adolescent birth rate is one of the Millennium development goal indicators, MDG 5b: access to reproductive health services. It is used by WHO, the United Nations (UN) and all the member states to monitor and evaluate the problem of adolescent pregnancy. However, there are some discrepancies in the results of adolescent birth rate calculated from different sources of data. This study had two main objectives. The first was to describe Thailand adolescent birth rate, its trend and related indicators from the year 1990 to the recent year in 2012. The second was to explain the sources of discrepancies between different databases to help readers understand and justify how to use the results from each database.

Material and Method

This was a descriptive study. The indicators and its definitions were as follow:

Adolescent birth rate:

The annual number of births to women aged 15-19 years per 1,000 women in that age group⁽³⁾. This indicator is technically known as adolescent fertility rate or age-specific fertility rate for women aged 15-19. The preferred data sources by WHO are civil registration with complete coverage, population census and household survey. In this study, two data sources were used to calculate the adolescent birth rate in country level. The first was come from the 2012 update for MDG database⁽⁴⁾ and the second was come from

Thailand Public Health Statistics⁽⁵⁾.

The identifiers of each woman were given only the encrypted identification numbers to ensure the privacy and confidentiality of the subjects in the database.

Related Indicators

Number of births by adolescents:

The annual number of births to women aged 10-14 and 15-19 years.

Adolescent fertility proportion:

The proportion between the annual number of births to women aged 15-19 and the total number of births.

Both the number of births by adolescents and adolescent fertility proportion were come from the Public Health Statistics for the year 1990 to 2011. In the year 2012, the data were retrieved from the birth registration.

Proportion of sexually experience adolescents:

The proportion of students who are sexually experienced, describe in percentage.

Proportion of condom use at first sex:

The proportion of students who used condom at their first sexual intercourse, describe in percentage.

Both the proportion of sexually experienced teenagers and the proportion of condom use at first sex were come from Youth risk behavior survey by the Bureau of Epidemiology⁽⁶⁾. Table 1 summarized the data sources used in this study.

Table 1. Data Sources

Source	Data
2012 Update for the MDG Database: Adolescent Birth Rate	Adolescent Birth Rate by countries
Thailand Public Health Statistics	Number of births by maternal age-group, Adolescent Birth Rate
Youth risk behavior survey	Proportion of sexually experience adolescents Proportion of condom use at first sex

Results

There were two sources provided Thailand adolescent birth rate, Thailand Public Health Statistics and the 2012 update for MDG database. In Public Health Statistics, adolescent births were calculated from the numerators, the annual number of births to women aged 15-19 from birth registration, and the denominators, number of women aged 15-19 in midyear population from the Ministry of Interior. The 2012 update for MDG database used the same source of

numerators. However, the number of women by age used as denominator came from estimation by the United Nations Population Division and published in World Population Prospects: The 2010 Revision⁽⁷⁾. The results from both data sources were shown in Table 2 and Fig. 1. Despite there were some discrepancies in year by year results, Thailand adolescent birth rates went in the same direction. The first period, from 1990 to 2000, was a decreasing trend. After that, Thailand adolescent birth rates were steadily increased.

Table 2. Summary data on adolescent birth rate, number of births and fertility proportion

AD	Number of births (age 10-14)	Number of births (age 15-19)	Number of births (total)	Fertility Proportion (age 10-14)	Fertility Proportion (age 15-19)	Adolescent Birth Rate (Public Health Statistics)	Adolescent Birth Rate (UN MDGs)
1990	1,668	127,350	956,237	0.2	13.3	42.2	42.3
1991	1,845	127,124	960,556	0.2	13.2	41.9	42.7
1992	1,963	123,382	964,557	0.2	12.8	40.7	41.9
1993	2,133	121,911	957,832	0.2	12.7	40.2	-
1994	2,106	122,406	960,248	0.2	12.7	42.8	42.3
1995	2,237	117,899	963,678	0.2	12.2	41.2	41.3
1996	1,703	113,272	944,118	0.2	12.0	39.7	40.8
1997	1,633	102,529	897,604	0.2	11.4	36.0	38.0
1998	1,761	110,996	897,495	0.2	12.4	39.1	41.5
1999	1,525	91,785	772,604	0.2	11.9	32.6	34.6
2000	1,444	86,675	773,009	0.2	11.2	31.1	32.8
2001	1,706	92,587	790,425	0.2	11.7	33.7	35.1
2002	1,641	93,554	782,911	0.2	11.9	37.9	35.7
2003	1,736	94,802	742,183	0.2	12.8	39.5	35.8
2004	2,432	110,206	813,069	0.3	13.6	47.3	-
2005	2,549	113,048	809,485	0.3	14.0	49.3	43.3
2006	2,510	112,509	793,623	0.3	14.2	48.9	43.3
2007	2,616	116,086	797,588	0.3	14.6	49.7	44.9
2008	2,715	118,921	784,256	0.3	15.2	50.1	46.2
2009	2,908	119,828	765,047	0.4	15.7	50.1	46.7
2010	3,074	120,115	761,689	0.4	15.8	50.1	-
2011	3,415	129,321	795,031	0.4	16.3	53.6	-
2012	3,725	129,451	801,737	0.5	16.1	53.8	-

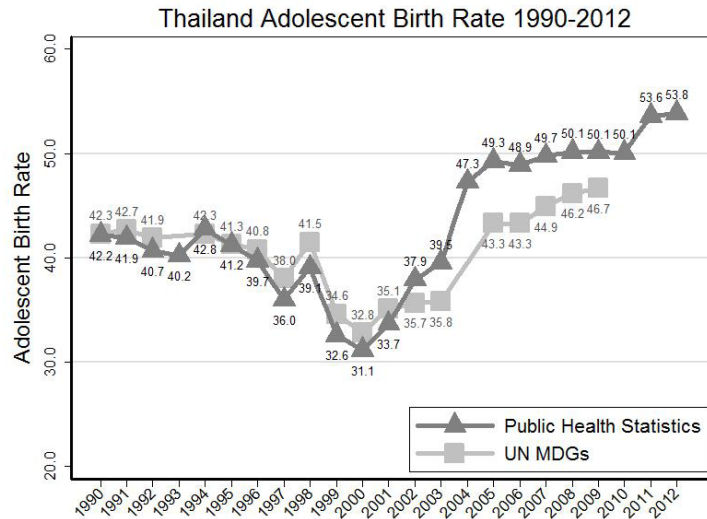


Fig. 1. Thailand adolescent birth rates, 1990-2012

Alongside with adolescent birth rates, the number of births by adolescent mothers and the adolescent fertility proportion were in increasing trend. The number of births by adolescent mothers, both 10-14 and 15-19 years, were lowest in the year 2000. Since the year 2000, the number of births by women aged 10-14 were rapidly increased from 1,444 births to 3,725 births in the year 2012.

Two indicators were used to describe adolescent sexual activity in this study, the proportion of sexually experience adolescents and the proportion of condom use at first sex.

The data source was the Youth risk behavior survey conducted by the Bureau of Epidemiology.

The survey started in 1996 targeted only matthayom 5 students. In 2004, matthayom 2 and vocational college 2 students were also included in the surveys. In matthayom 2 group, the proportion of sexually experience adolescents increased from 3.6 to 4.2 and 1.1 to 3.0 in male and female students group, respectively. Fig. 2. demonstrated increasing trend of the proportion of sexually experience adolescents in matthayom 5 and vocational college 2 students. The vocational college 2 students clearly had more sexual experiences than matthayom 5 students in both male

and female students group. The proportions of condom at first sexual intercourse were rapidly increased from the year 1998 to 2005. However, after the year 2005, the proportions of condom at first sexual intercourse seem to be stable at about 50% in all groups, both male and female students. Fig. 3. compared the proportions of condom at first sexual intercourse between matthayom 5 and vocational college 2 students.

Percentage of sexually experienced adolescents
Compare Matthayom 5 with Vocational College 2 Student

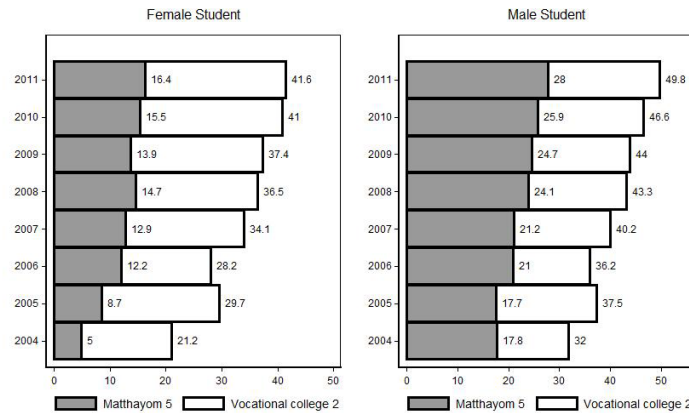


Fig. 2. Proportion of sexually experience adolescents: compare matthayom 5 with vocational college 2 students

Percentage of using condom at first sex
Compare Matthayom 5 with Vocational College 2 Student

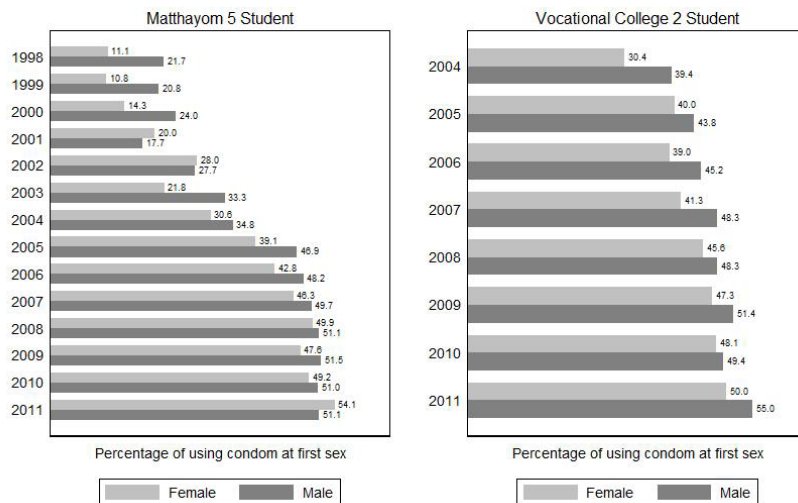


Fig. 3. Proportions of condom use at first sex: compare matthayom 5 with vocational college 2 students

Discussion

There were two sources provided Thailand adolescent birth rate with un-identical results, Thailand Public Health Statistics and the 2012 update for MDG database. These resulted from different denominators, numbers of women aged 15-19 at midyear, used. The Public Health Statistics used numbers of midyear population from the Ministry of Interior which are official statistics of Thailand while the 2012 update for MDG

database used denominators from the World Population Prospects 2010 revision. Question arise was why does the UN population division use estimated population rather than country official statistics. The UN population division gave the reason that their analyses also taking incompleteness of coverage, lack of timeliness and error coding into account. Which databases should be used depend on our objective. To compare adolescent birth rate across the countries, the 2012 update for MDG

database should be used because of the same calculation method. However, to estimate between regions or provinces in Thailand, the country official statistics is better because it can give more details by provinces or by regions.

Despite un-identical adolescent birth rates, trend of adolescent birth rate and related indicators and were on the same direction. From the year 2000, Thailand adolescent birth rates were definitely in an increasing trend. To compare with other regions of the world, the World Population Prospects: The 2012 Revision⁽⁸⁾ was used to demonstrate global and regional trend of adolescent birth rate. The results show that the world and regional estimate of adolescent birth rates were all in decreasing trend since the year 1950, except for EUROPE that were steadily had low adolescent birth rates. To assess the increasing trend of Thailand adolescent birth rate, the author used the Youth risk behavior surveys to describe teen sexual activity. There were others national surveys issued teen sexual activity in Thailand^(9,10) but the Youth risk behavior surveys, annually, were the most regularly conducted. That was a reason to use these surveys for assess teen sexual activity trend. The results show that proportion of sexually experience adolescents increased but proportions of condom at first sexual intercourse seem to be stable at about 50% after the year 2005. These findings might reflect difficulty to access to contraception services of the adolescents resulting in increased numbers of adolescent pregnancies and adolescent birth rates.

The results from this study clearly demonstrated that Thailand performance to work with adolescent pregnancy need to be improved. Thailand adolescent birth rates were still increasing while other paths of the world can converse to decreasing trend⁽⁸⁾. This is a complicated topic with many issues involved. Gap to

access to reproductive services of the teenagers was one of the important issues that should pay attention for.

Conclusion

Thailand adolescent birth rate is still in the increasing trend. Country action plan need to be improved for effectively reduce the adolescent birth rate. One of the important issues is to enhance access to reproductive services in adolescents.

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อัตราคลอดในวัยรุ่นของประเทศไทย: แนวโน้มและตัวชี้วัดที่เกี่ยวข้อง

บุญฤทธิ์ สุจริตน์

วัตถุประสงค์ : เพื่อบรรยายแนวโน้มของอัตราคลอดในวัยรุ่นและตัวชี้วัดที่เกี่ยวข้องในประเทศไทย

ระเบียบวิธีวิจัย : เป็นการวิจัยเชิงพรรณนา โดยใช้ฐานข้อมูลทุติยภูมิในระดับประเทศและระดับนานาชาติทั้งหมด 3 ฐานข้อมูล โดยค่าสถิติทั้งหมดจะถูกบรรยายในรูปแบบของ จำนวน, ร้อยละ และอัตรา

ผลการศึกษา : ข้อมูลจากสถิติสาธารณสุขของประเทศไทยพบว่า อัตราคลอดในวัยรุ่นของประเทศไทยอยู่ที่ 42.2 ต่อประชากรหญิงอายุ 15-19 ปี 1,000 คนในปี ค.ศ.1990 อัตราคลอดในวัยรุ่นลดลงเรื่อยๆจนต่ำสุดที่ 31.1 ต่อประชากรหญิงอายุ 15-19 ปี 1,000 คนในปี ค.ศ.2000 หลังจากนั้นอัตราคลอดในวัยรุ่นของประเทศไทยก็สูงขึ้นเรื่อยๆ ข้อมูลล่าสุดในปี ค.ศ.2012 พบว่าอัตราคลอดในวัยรุ่นของประเทศไทยอยู่ที่ 53.8 ต่อประชากรหญิงอายุ 15-19 ปี 1,000 คน อัตราคลอดในวัยรุ่นที่ได้จากสถิติสาธารณสุขของประเทศไทยกับที่ได้จาก ฐานข้อมูลสำหรับเป้าหมายสหัสวรรษขององค์การสหประชาชาติจะไม่เท่ากัน เนื่องจากใช้วิธีการคำนวณต่างกัน

สรุป : ผลการศึกษา: อัตราคลอดในวัยรุ่นของประเทศไทยยังมีแนวโน้มเพิ่มขึ้นอย่างต่อเนื่อง
