

# Characteristics of Women Attending the Female STD Clinic at Siriraj Hospital, Thailand: A 2-Year Review of the Medical Records

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**Objective:** To assess characteristics of women attending the Female STD Clinic at Siriraj Hospital and their making use of the services.

**Materials and Methods:** This was a retrospective approach to review patient files at Female STD Clinic at Siriraj Hospital in two years (2018 to 2019). Eight hundred and nineteen women with complete patient files were included in study analysis. Frequency and percentage with mean±SD was applied for background variables. Bivariate analysis was performed to assess association of background variables and other factors such as coitache, condom use, etc., using Chi-square test to determine the significant association at  $p \leq 0.05$ .

**Results:** Women attending Siriraj Female STD Clinic were in middle-low socioeconomic status, 36.8% possessed primary education. Sixty-six point one percent were HIV infected, 20.3% were condyloma acuminata, 10.6% were syphilis, and 3.1% were HPV infection. Forty-two point nine percent started coitache at 18 years of age or younger. About only 6% had used condom and predominantly before having first gravida.

**Conclusion:** HIV infection was the most prevalent, and one in five was condyloma acuminata. Many women started their coitache at 18 years of age or less. Condom use was prevalent before first gravida. Most women contacted the clinic when severe symptoms occurred. However, inadequate treatment was the problems as a few women came back for repeat treatment, which resulted in the inconsistency of medical care due to inconvenience of transportation, using the nearby clinic to save travel time.

**Keywords:** Socio-demographic status, Age of coitache, Number of partner, Condom use, Clinic contact

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Despite the long-time strategies to deal with sexually transmitted disease (STD) and HIV/AIDS in the country and a 79% drop of the rate of sexually transmitted infection in men in Thailand, it cannot be denied that the prevalence of STD and HIV/AIDS in Thailand is still one of the major public health problems<sup>(1-3)</sup>. This may be in part due to the large-scale development of the country creating more modern society and more opportunity for work to attract more rural people to seek jobs in the major cities. Furthermore, Sexual health education and public

awareness about STD knowledge and provision have been limited due to the stigma of the diseases. The other factor that may facilitate the STD and HIV infection in the country is the underuse of condom for prevention as many men in the country have commonly frequented commercial sex workers<sup>(4)</sup>. Although condom use has been reported to protect against the STD or HIV/AIDS, inconsistency of use has also contributed to the less effectiveness of the device to protect the STD<sup>(5)</sup>. Delay in consulting health services is also one of the important causes of contacts to partners as many men and women who have had genital wart or nongonococcal urethritis assume that the symptoms will 'go away'<sup>(6)</sup> and they wait until the serious symptoms occur. In some setting the populations tested positive for STD are more likely to be adolescents and those with multiple partners<sup>(7-10)</sup>. Moreover, women with low educational

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level are more likely to acquire the diseases than those whose education is higher<sup>(11)</sup>. Among women reporting the past STD, genital warts were the most reported infection women encountered, and nearly half of women received treatment at their private clinics. However, only very few women, 5%, had actually used services at the STD clinic<sup>(12)</sup>. Source of treatment can determine the successful or unsuccessful care of the diseases as about 59% or less of women seeking STI care from different sources still think that they are inadequately treated<sup>(13)</sup>. Bacterial vaginosis is more likely to occur to those who have sexual exposure with new partners<sup>(14)</sup>. Many women or men acquire sexually transmitted infections from their new partners because they have little or no knowledge about the sexual infection history of their partners<sup>(15,16)</sup>. In addition, heterosexual men with multiple sexual partners are more likely to acquire chlamydial infection with asymptomatic signs, but increasing condom use or consistent condom use with regular partners has reduced the urethral infection<sup>(17)</sup>. Age of coitache and duration of sexual life have also been reported to have association with the acquisition of STD and especially HIV/AIDS as the early coitache will result in the longer duration of sexual life<sup>(18)</sup>. This also implies the likelihood of having more sexual partners in life time and contacting more STD. Moreover, women whose coitache is between the ages of 10 to 14 years are twice as likely to report having STD in the last five years<sup>(19)</sup>. All these qualities have accelerated the contact of the STD and eventually the HIV/AIDS. In Thailand characteristics of women, such as condom use, coitache, number of sexual partners and return for treatment, attending the STD clinic have rarely been reported. The present study focuses on what characteristics of women seeking care at the Female STD Clinic at Siriraj Hospital, Department of Obstetrics and Gynecology, Faculty of Medicine Siriraj Hospital, Mahidol University. Patient files of women attending the Female STD Clinic at Siriraj Hospital between 2014 and 2015 were reviewed and analyzed. The objectives were to assess characteristics of women received treatment at the female STD clinic, their demographic data, type of STD, coitache, condom use, number of partners, duration of sexual engagement, frequency of returning to follow-ups and association between the important background variables and other variables such as number of partner, coitache, condom use, and the diseases.

## Materials and Methods

The present study is a retrospective approach. A

review of the patient files of women seeking medical treatment at the Female STD Clinic at Siriraj Hospital in two years (2018 to 2019), was assessed. Women whose patient files were incomplete were excluded from the review. Eight hundred and nineteen women with complete patient files were included in the analysis and report. All women's data were reviewed and entered in the SPSS software, version 18 for analysis. Frequency and percentage with mean±SD was applied for the background variables of women such as age, education, income, etc. Bivariate analysis to assess the association of background variables and their factors such as coitache, condom use, number of partners, and duration of sexual engagement was performed using Chi-square test to determine the significant association at  $p \leq 0.05$ .

The present study has been approved by the Siriraj International Review Board of the Faculty of Medicine Siriraj Hospital, Mahidol University, Bangkok, Thailand.

## Results

The majority of women attending the STD clinic were in middle-low socioeconomic status (Table 1). Over one-third (36.8%) of them possessed primary education or no formal education, 44.2% had reached secondary or vocational school, whereas only 18.0% had higher education. Nearly one-third (30.8%) of the women did not generate income to the family. Slightly over one-third (35.0%) could earn a monthly income of 8,000 Baht or less. Those with higher monthly income (16,001 Baht) constituted only 10.5% of the women. Those women who were 25 years of age or younger made up 28% of the total, 26 to 35 years of age 38.6%, 36 to 45 years of age 23.0% and 46 years of age and older constituted 10.5% of the women. Their mean age was  $32.36 \pm 10.702$ . Most women were married (65%), 14.9% of the women were not living with their partners or their partners died, 9.8% of them remarried, whereas 10.4% were single women. A quarter of women (24.5) had not experienced any pregnancy in their life. Those with one pregnancy were accounted for 32.5%, 2 pregnancies 24.3%, 3 pregnancies 9.5%, and 4 or more pregnancies 9.1%. On average, women had 1.14 children. Over a quarter (26.1%) of women had not experienced any contraceptive method, 39.7% of them had used oral contraceptive pills, 7.8% injectable method, 8.2% female/male sterilization, whereas only 2.9% of the women used the intrauterine devices, subdermal implants, and the safe period. Condom was used among 15.3% of the total women.

**Table 1.** Demographic characteristics of women (n = 819)

Category	n (%)
Age (years)	
≤25	229 (28.0)
26 to 35	316 (38.6)
36 to 45	188 (23.0)
46 to 55	60 (7.3)
≥56	26 (3.2)
Mean±SD	32.36±10.702
Marital status	
Single	85 (10.4)
Married	532 (65.0)
Divorced/separated/widowed	122 (14.9)
Remarried	80 (9.8)
Gravida	
0	201 (24.5)
1	266 (32.5)
2	199 (24.3)
3	78 (9.5)
4	46 (5.6)
≥5	29 (3.5)
Number of living children	
0	265 (32.4)
1	300 (36.6)
2	175 (21.4)
3	49 (6.0)
4	15 (1.8)
≥5	15 (1.8)
Mean±SD	1.14±1.103
Education	
≤Primary	301 (36.8)
Secondary/vocational	362 (44.2)
Higher	156 (18.0)
Occupation	
Unpaid/housewife/unemployed	252 (30.8)
Private/public employee	567 (69.2)
Family income/month (Baht)	
No income	268 (32.7)
≤8,000	287 (35.0)
80,001 to 16,000	178 (21.7)
16,001 to 24,000	48 (5.9)
≥24,001	38 (4.6)
Use of contraception	
None	214 (26.1)
Oral contraceptive pills	325 (39.7)
Injectable	64 (7.8)
Female/male sterilization	67 (8.2)
Condom	125 (15.3)
Other	24 (2.9)

SD=standard deviation

**Table 2.** Types of STDs, coitache, number of sex partners, duration of sexual engagement, follow-up, and reasons for not coming back

Category	n (%)
Types of STDs	
HIV/AIDS	541 (66.1)
Condyloma acuminata	166 (20.3)
Syphilis	87 (10.6)
HPV infection	25 (3.1)
Coitache (years)	
≤18	351 (42.9)
19 to 24	331 (40.4)
25 to 29	102 (12.5)
≥30	35 (4.2)
Mean±SD	20.06±4.497
Number of sex partners	
1	322 (39.3)
2	341 (41.6)
≥3	156 (19.0)
Duration of sexual engagement (years)	
≤5	247 (30.2)
6 to 10	169 (20.6)
11 to 20	268 (32.7)
≥21	135 (16.5)
Mean±SD	12.28±9.720
Number of years of FU	
Currently FU	198 (24.2)
Less than 1 year	451 (58.7)
Less than 2 years	102 (12.5)
Less than 3 years	34 (4.2)
Less than 4 years	4 (0.5)
Reasons for not coming back	
Currently FU	198 (24.2)
Convenience at other health premises	173 (21.1)
Could not contact	398 (48.6)
No need to come back	50 (6.1)

STDs=sexually transmitted diseases; HPV=human papillomavirus; SD=standard deviation; FU=follow-up

Of 819 women treated at this premises, 541 or 66.1% were HIV infected patients, 166 or 20.3% were women with condyloma acuminata, 87 or 10.6% were syphilis, and 25 or 3.1% were human papillomavirus (HPV) infection (Table 2). Nearly half of women (42.9%) started coitache at an early 18 years of age or younger, 40.4% had their coitache at the ages between 19 and 24 years and 16.7% at the ages of 25 and over. Over two in five of women (41.6%) stated that they had had 2 sexual partners, 39.3% reported only one sexual partner and 19.0% admitted that they had had 3 or more sexual partners. Thirty point two percent of the

**Table 3.** Age of women and types of STD

Age group	Type of STD, n (%)				
	HIV	Condyloma	Syphilis	HPV	Total
≤25 years	130 (15.9)	82 (10.0)	12 (1.5)	5 (0.6)	299 (28.0)
26 to 35 years	233 (28.4)	53 (6.5)	22 (2.7)	8 (1.0)	316 (38.5)
≥36 years	178 (21.7)	31 (3.8)	53 (6.5)	12 (1.5)	274 (33.5)
Total	541 (66.1)	166 (20.3)	87 (10.6)	25 (3.1)	819 (100)

STD=sexually transmitted disease; HPV=human papillomavirus

p<0.001

women had engaged in sexuality 5 years or less, 20.6% of them had the duration of sexual relationship during 6 to 10 years, 32.7% during 11 to 20 years and 16.5% having sexual engagement 21 years and over. Nearly a quarter of women (24.2%) are patients with current follow-up to the clinic either for the scheduled Pap's smear taken or repeated treatment, 58.7% of them did contact the clinic for less than one year, 12.5% of them did come back to the clinic for less than two years and 4.7% of them less than 3 years. When having telephone contact to ask the reason why they did not contact the clinic, 21.1% of women stated that they went to obtain services at the other health premises, 6.1% said that they were free from the diseases and needed no follow-up, however, 48.6% of the women could not be reached to obtain the information about their health status.

When looking at the association between the types of STD they experienced and age of women (Table 3), HIV positive had been prevalent in women at each age group, especially at aged 26 to 35 years, accounting for 28.4%, and condyloma acuminata was found more among women aged 25 years old or younger, at 10.0%. Syphilis was more prevalent among women in older ages, 36 years and older, which constituted 6.5%. The least prevalent was the HPV infection where the highest amount was at the ages of 36 years and older, at 1.5%. The association of ages and the STD has statistical significance at p<0.001.

Table 4 demonstrates the association between condom use and marital status of women, and gravida. It is observed that the most prevalence of condom use in the single and remarried women is equal at 23.5% and 23.8%, respectively with a significant difference than those women in the other groups (p=0.001). In addition, women who have not had a child use condom the most at 23.9%, while women with gravida 1 to 5 use it less with a statistically significance (p=0.006).

When looking at the number of sex partner and age of coitache, and number of years of having

**Table 4.** Condom use and marital status, and gravida

	Condom use, n (%)		p-value
	No (n = 694)	Yes (n = 125)	
Maternal status			0.001
Single	65 (76.5)	20 (23.5)	
Married	454 (85.3)	78 (14.7)	
Divorced	114 (93.4)	8 (6.6)	
Remarried	61 (76.3)	19 (23.8)	
Gravida			0.006
0	153 (76.1)	48 (23.9)	
1	234 (88.0)	32 (12.0)	
2	171 (85.9)	28 (14.1)	
3	69 (88.5)	9 (11.5)	
4	40 (87.0)	6 (13.0)	
5	27 (93.1)	2 (6.9)	

**Table 5.** Number of sex partners and age of coitus, and number of years of having coitus

	No. of sex partners, n (%)			p-value
	1	2	≥3	
Age of coitache (years)				<0.001
≤19	107 (24.2)	206 (46.5)	130 (29.3)	
20 to 30	196 (55.1)	134 (37.6)	26 (7.3)	
≥31	19 (95.0)	1 (5.0)	0 (0.0)	
No. of years of having coitus				<0.001
≤5	124 (50.2)	87 (35.2)	36 (14.6)	
6 to 10	52 (30.8)	77 (45.6)	40 (23.7)	
11 to 12	191 (51.9)	121 (32.9)	56 (15.2)	
≥21	55 (40.7)	56 (41.5)	24 (17.8)	

coitus (Table 5), it is found that 95.0% and 55.1% of women aged 20 to 23 years old and ≥31 years old, respectively, have only 1 partner. It is interesting to note that women whose age is 19 years old and younger possess 3 partners, which constitutes 29.3% with a significant difference from other groups of women, p<0.001. Moreover, women with only one partner have a duration of having coitus between

11 and 12 years, while 45.6% of those who have 2 partners having duration of coitus between 6 and 10 years. 23.7% of women with 3 partners also have the duration of coitus between 6 and 10 years, with a statistically significance ( $p < 0.001$ ).

## Discussion

The majority of women were in middle-low socio-economic status, which is very similar to those characteristics of the general population obtaining medical and health care at the premises. This is because this premises is the governmental hospital, which serves the general population, particularly the middle to low income people. One in four women had been divorced or remarried, and nearly one-third of them still had no child, and one in four women had never used any contraceptive methods in the past. It is suggested that family planning services should be integrated into the STD services. Nearly one in three women had no job or income. Moreover, one in five women had 3 or more partners in the past, and one in three women had sexual engagement for eleven to twenty years. This indicates that STD history is very essential in dealing with the key success of the treatment. HIV infection is the most prevalent infection found. In addition one in five women attending the author's clinic was treated with condyloma acuminata, which can be predicted that it will be the continuing and ongoing problem in the country. It is observed that one of the reasons why the HPV infection is relatively low due to the under-reported data. Also, the clinical test of HPV infection has been rarely performed to women due to its high cost without subsidy from the government. The rate of syphilis has been low as the disease has now been earlier detected and prevented among the population by the national public health program. Other disease such as *Chlamydia trachomatis* is not uncommon, but it is asymptomatic among women. In this regard, *C. trachomatis* should be included in the screening program for women's reproductive check-up. Over two in five women have started their coitache very early, at the ages of 18 years or younger. It has thus resulted in early contact of STD. Therefore, sex education should be implemented in the secondary school or university curriculum. Moreover, over three in five women have had more than one sexual partner in their life, and one in three women have been exposed to coitus between 11 and 20 years and one in six women having sexual exposure 21 year and over. Being multiple sexual partners is the high risk of acquiring the STD or HIV/AIDS. About 6% of women

have used condom before they became pregnant, and its use has declined once they have a child. The condom use is quite low, therefore promotion of condom use as a means of STD protection is important, and should not be promoted as a contraceptive method due to its high failure rate or low contraceptive efficacy. Most women contacted the clinic when severe symptoms occurred to them such as severe abdominal pain, fever and abnormal genital discharge and/or swelling. However, once the symptoms subsided, many of them hardly returned for the repeated treatment or follow the instruction of medical care. This may be because of the matter of time spent on clinic procedure. Thus, a one-stop clinic should be considered in the future. Moreover, only one in four women came back for the next follow-up visits, while over one in five women preferred to visit the other health premises which were more convenient to them. One more important thing is that nearly half of the women left the address or telephone number which could not be reached. Thus, this makes it difficult to retrieve them for the follow-up visit for more treatment or assessing the treatment result. This has resulted in the 'inadequate' treatment. More attention should be paid on the address contact women left at the clinic. Furthermore, adequate and close counseling should also be provided to them on the basis of the importance of clinic revisits to solve or assess the treatment results.

## Conclusion

Women walked in at the STD Clinic at Siriraj Hospital were in low socio-economy. HIV infection was the most prevalent, followed by condyloma acuminata, syphilis and HPV infection. A majority of them started coitache at the age of 18 years or younger. Many had more than two partners in their sexual life. Condom use was predominantly prevalent before the first gravida. Once the women were treated, very few came back for follow-up or resupplies of the treatment and sought the new health premises when symptoms recurred. This has led to the 'incomplete treatment' at this premises and they have to start the new treatment again, which in turn made the treatment of the diseases longer than they should be and also it is a waste of health resources in terms of health economy.

## What is already known on this topic?

Prevalent of STD and HIV/AIDS particularly among the adolescents in the country is still on the rise due to the lack of sexual health and sex education and also stigmatized attitudes to this issue that impeded general reproductive health women to

obtain medical services and treatment at the time it should be. Moreover, lack of knowledge among the population especially among the multi-partners and those having sex without protection also contributed to the cause of these STD diseases. Low and inconsistent condom use was an important cause of contracting these diseases. Earlier coitache had reflected the longer duration of sexual life also contributed to having the diseases.

### What this study adds?

In this study over one-third of women possessed the primary education with low socio-economic status which contributed to 66% of HIV infection, 20% condyloma acuminata, 11% syphilis, and 3% HPV infection. These figures reflected the low educational level and socio-economic status of women, which were the key risk factors to demonstrate the risk factors of women getting the STD. About 32.4% of women had no children. In addition, 42% already had 2 partners in their life. Forty-three percent of these women started coitache at the age of 18 year or younger. Condom use was low and was adopted before having the first gravida (6%). This could be said that they had an awareness of condom not as an appropriate contraceptive method to protect them against pregnancy but only as a means of protection against the STD. Once women obtained medical treatment, very few came back for the follow-up visit or the next planned treatment care. Thus, a one-stop service should be implemented plus the telephone follow-up in case they are completely cured. Giving the inaccurate address to the clinic was quite a major problem because the medical or health personnel could not be able to retrieve them back to the clinic once a problem with results of treatment occurred. An accurate system to verify their addresses and telephone numbers should be installed. This has led to the incomplete treatment care an individual woman should have received. In return it reflects why these diseases still wildly persist.

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### Conflicts of interest

The authors declare no conflict of interest.

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