Report of Project Results

Title

REPRODUCTIVE HEALTH AND HIV

Contraception and the prevention of HIV infection - Conception and contraception in Thai people living with HIV

Rachadapiseksompotch Fund

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English Abstracts

Abstract

Objective: To assess sex practices, contraceptive methods used and the intention for conception in Thai heterosexual HIV-positive women and men, who are either married or in a stable relationship.

Methods: We applied a mixed research method, by gathering quantitative data, via administering a questionnaire, and qualitative data, via conducting focus group discussions (FGD). 200 HIV-positive men and women at HIV-NAT clinic and Anonymous Clinic in Bangkok, completed a self-administered questionnaire. Eleven female participants took part in two FGD, based on their intention for conception.

Statistical analysis: We used descriptive statistics to present the results from the questionnaire. To assess association between two variables of interest we applied logistic regression or Chi-square exact test. We used a narrative approach to present the results from the FGD.

Results: The median age of the participants was 37 years, and they were living for a median of 8.5 years with HIV. Almost all participants were sexually active and almost all were on successful antiretroviral therapy. The most common choice of contraception for women was the male condom, followed by female sterilization (40%). Half of them reported the use of dual contraception. Almost all men reported consistent condom use. Most of the participants had sex with their main partner, of whom one-third were HIV-negative. One-fifth of men had sexual relationship with an occasional partner. The intention for conception was significantly less after being diagnosed with HIV. Nevertheless, 25% of the participants expressed a desire to have a child. There was a significant association between the intention for conception and the fewer years of being married and the lower number of living children. Men and women with higher levels of education tended to have a stronger desire for a child.

Discussion: Thai men and women with stable HIV and married or in a stable relationship are sexually active and tend to practise safe sex. Many desire to have children. Therefore, there is a need to provide comprehensive reproductive health care services to this group of people. HIV-positive men and women, who want to have children, should be supported and counseled regarding safe ways to conceive. For those who do not want to have children, there is a substantial choice of contraceptive methods.

Thai Abstracts

บทคัดย่อ

วัตถุประสงค์ : เพื่อประเมินพฤติกรรมทางเพศ วิธีการคุมกำเนิด และความสนใจในการคุมกำเนิดของหญิงและชายรักต่างเพศที่ติดเชื้อเอชไอวีชาวไทยซึ่งได้แต่งงานหรือมีความสัมพันธ์แบบคู่อย่างมั่นคง

วิธีการ : การวิจัยนี้จะใช้วิธีการวิจัยแบบผสม โดยข้อมูลเชิงปริมาณได้มาจากการตอบแบบสอบถามด้วยตนเองของผู้เข้าร่วมโครงการวิจัยชายหญิง ณ ศูนย์วิจัยฮีพแนทและคลินิคนิรนาม กรุงเทพฯ จำนวนทั้งสิ้น 200 คน และข้อมูลเชิงคุณภาพได้มาจากการอภิปรายกลุ่มแบบมุ่งเป้าในหญิงที่ติดเชื้อเอชไอวีจำนวน 2 กลุ่ม โดยอ้างอิงความสนใจในการคุมกำเนิด

การวิเคราะห์ทางสถิติ : สถิติเชิงพรรณานำมาใช้เพื่อแสดงผลจากการตอบแบบสอบถาม มีการใช้การวิเคราะห์เชิงถดถอย หรือ ไคสแควร์เพื่อประเมินความสัมพันธ์ระหว่างตัวแปรที่สนใจ 2 ตัว และใช้การบรรยายสำหรับผลของการอภิปรายแบบกลุ่ม

ผลการศึกษา : อาสาสมัครที่เข้าร่วมในโครงการวิจัยนี้มีค่ามัธยฐานของอายุ 37 ปีและของระยะเวลาการติดเชื้อเอชไวอีมาแล้ว 8.5 ปี อาสาสมัครเกือบทุกคนยังมีเพศสัมพันธ์อยู่และกำลังรักษาด้วยยาต้านไวรัสเอชไอวีอย่างประสบความสำเร็จ การคุมกำเนิดที่นิยมใช้มากที่สุดสำหรับผู้หญิงคือ การใช้ถุงยางอนามัยชาย และรองลงมาคือ การทำหมันหญิงประมาณร้อยละ 40 อาสาสมัครจำนวนกึ่งหนึ่งแจ้งว่ามีการใช้การคุมกำเนิดทั้ง 2 ชนิดดังกล่าว อาสาสมัครชายเกือบทั้งหมดใช้ถุงยางอนามัยอย่างสม่ำเสมอ อาสาสมัครส่วนใหญ่มีเพศสัมพันธ์กับคู่นอนประจำซึ่ง 1 ใน 3 ไม่ได้ติดเชื้อเอชไอวี ประมาณ 1 ใน 5 ของผู้ชายกำลังมีเพศสัมพันธ์กับคู่นอนชั่วคราว ความสนใจในการคุมกำเนิดลดลงอย่างมีนัยสำคัญหลังจากทราบว่าติดเชื้อเอชไอวี อย่างไรก็ตามร้อยละ 25 ของอาสาสมัครมีความประสงค์ที่จะมีบุตร ความสนใจในการคุมกำเนิดมีความสัมพันธ์อย่างมีนัยสำคัญกับจำนวนปีของการแต่งงานที่น้อยและจำนวนบุตรที่มีชีวิตอยู่น้อย ผู้ชายและผู้หญิงที่มีระดับการศึกษาสูงมีแนวโน้มที่จะต้องการบุตรมากขึ้น

อภิปรายผล :

อาสาสมัครชายและหญิงไทยที่ติดเชื้อเอชไอวีและแต่งงานแล้วหรือมีสถานภาพสมรสคู่ มีเพศสัมพันธ์อย่างสม่ำเสมอและมีแนวโน้มมีเพศสัมพันธ์อย่างปลอดภัย อาสาสมัครหลายคนปรารถนาที่จะมีบุตร ดังนั้นจึงมีความจำเป็นที่จะต้องจัดให้มีบริการด้านการวางแผนครอบครัวอย่างเข้าใจให้กับคนกลุ่มนี้ ชายและหญิงที่ติดเชื้อเอชไอวีและต้องการที่จะมีบุตรควรได้รับคำปรึกษาและช่วยเหลือเพื่อให้ตั้งครรภ์อย่างปลอดภัย สำหรับคนที่ไม่ต้องการมีบุตรมีทางเลือกของการคุมกำเนิดที่มีอยู่เพื่อการวางแผนครอบครัว

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1. Background

In the era of highly active antiretroviral therapy (HAART), people living with HIV (PLH) enjoy a significantly improved quality of life (1). The success achieved in this regard is remarkable. As a result doctors are being approached more and more often with issues from common reproductive health (2).

Key elements of reproductive health are sexual life, conception and contraception. PLH have the same sexual needs as the HIV-negative population. HIV-positive men, women and transgender do practise sex. Sexual behaviours around the world are extremely diverse, due to various factors – personal preferences, cultural, religious and other traditions. Contraception provides the possibility of practicing sex in a safe way, by preventing unwanted pregnancies; in addition, some of the methods sustain the prevention of HIV transmission. Contraception in women with HIV is also a potent method for reducing the transmission of HIV from mother to child.

The management of PLH during their reproductive years is getting increasingly important. According to WHO, PLH should be offered routine counselling on sexual and reproductive health, so that they can take and implement informed, healthy and appropriate decisions (3). In addition, induced abortion – the last resort for ending an unwanted pregnancy – is illegal in many countries. This is the case in Thailand, for instance (4). Abortion is not a method of contraception as such and the consequences of illegally induced abortions might be dramatic. Thus, offering a comprehensive choice of contraceptive methods for PLH is crucial.

Contraception is extremely important as it provides the opportunity to plan desired pregnancies – or the opposite, i.e. to avoid getting pregnant. The latter is particularly relevant when there is a risk of aggravating a medical condition through pregnancy or, for example because of taking a teratogenic drug such as the antiretroviral Efavirenz.

On the other hand PLH want to have children as well. The focus in recent years is shifting rather from management of HIV infection in pregnant women to management of conception and pregnancy in HIV positive women.

Sexual practice is the principal mode of the spread of HIV infection in the 21st century worldwide (6, 7). It is also likely that the sexual behavior of some PLH puts them more at risk than the general population. In Thailand, approximately 1% of a population of 62.8 million (2006) is living with HIV. There are still close to 14'000 new infections per year. Around 25% of new infections in Thailand are in men who have sex with men (MSM) and there is a 30% - 40% increase of new infections in married women (12th National Seminar on AIDS, 2009). That is why it is very important that studies in the field of sexual life, contraception and the prevention of HIV continue.

According to the Demographic and Health Surveys (DHS) Thailand, 2000, close to 80% of Thai women, regardless of their HIV-status, are using some kind of contraception – out of which approximately 50% have chosen hormonal contraception, 25% female sterilization and the rest 4-5% are distributed among other methods such as intrauterine device, condoms, male sterilization. The total fertility rate is 1,7%.

There is no data at present about sexual behavior and the methods of contraception used by PLH in Thailand. We do not know whether there is any difference in their fertility rate and to what extend PLH can benefit from in general well developed reproductive health service in the country.

Addressing the sexual needs of PLH is a complex undertaking for several reasons. Discordant and concordant couples, sexual and other system dysfunctions due to HIV infection or ARV therapy, adverse effects of ARVs, as well as diverse sexual behaviours in MSM and transgender groups are some of the main issues that contribute to this complexity. In addition, systematic reproductive health guidelines for PLH do not exist at present (5). Therefore it is very important that studies in this field in the light of HIV infection continue.

2. Hypothesis and study objective

2.1 Hypothesis

- At least 50% of Thai HIV-positive heterosexual people, married or living in a stable relationship, engage in unsafe sexual activities and use inappropriate contraceptive methods

2.2 Principal objective

- To assess sex practices, contraceptive methods used and the desire for conception in Thai PLH

3. Study design

This was a cross sectional study that included two stages: stage I (completion of a questionnaire) and stage 2 (a focus group discussion) in order to assess sex practices, contraceptive methods used and the desire for conception in Thai PLH. We made the hypothesis that 50% of Thai HIV-positive heterosexual people, married or living in a stable relationship engage in unsafe sexual activities and use inappropriate contraceptive methods. By unsafe sexual activity we understood having sex without a condom. By inappropriate contraceptive methods we understood practicing vaginal sex without using effective contraceptive methods like condoms, hormonal contraception, intrauterine device or sterilization (male or female).

3.1. Study population

3.1.1 For questionnaire: 100 HIV-positive women and 100 HIV-positive heterosexual men
3.1.2 For focus group discussion: a total of 11 HIV-positive subjects had been done. The groups were categorized based on desire to conceive

3.2. Study duration

The questionnaire and focus group discussion were a one-time assessment. They will be completed on different days. The total duration of the study will be 10 months including preparation of study and obtaining IRB approval (2 months), conducting the study (6 months) and analysis and reporting (2 months).

3.3. Study sites

Volunteers will be recruited from:

- HIV-NAT and Anonymous Clinic, The Thai Red Cross AIDS Research Centre
- Allergy and Immunology Clinic, Chulalongkorn University

3.4 Study procedures

3.4.1 First stage: questionnaire

After signing the informed consent form, 100 HIV-positive women and 100 HIV-positive heterosexual men were asked to complete a self-administered questionnaire. The subjects were asked questions about their sexual practices, the methods used for contraception and STD prevention, their desire to have children and their general satisfaction with available reproductive health services. The questionnaire was in Thai. The study focused on women and men either married or having a stable relationship.

Inclusion criteria:

- Female between 18-39 years of age or male between 18-49 years of age
- Currently engaged in a stable relationship with one main partner of opposite gender, married or co-habitat or in a romantic relationship of more than 6 months
- HIV-positive status confirmed serologically (proved with a document)
- Subjects should be able to read and write (be literate)
- No mental or physical conditions that may limit informed participation in the study
- Currently not having AIDS-defined illness
- Signed informed consent form
- Willing to participate in the study

3.4.2 Second stage: focus group discussion

After completion of the questionnaire by the 200 women and men, on a second stage two focus groups were formed for an in-depth discussion of contraceptive choices and the desire for conception (appendix 2). The groups were constituted as follows:

Table 1: Focus groups

	Focus groups	N
1	Women who want to conceive	6 - 8
2	Women who do not want to conceive	6 - 8

The interview was in Thai. It was last approximately 2 hours and it was recorded. The participation in the focus groups was voluntary and an informed consent form was signed by all subjects. Subjects for focus groups 1 and 2 were selected at random from the 100 HIV-positive women who had completed the first step in this assessment – the self-administered questionnaire, according to the answers they had given in the questionnaire. Female subjects invited to participate in the focus group discussion may also be asked to disclose their HIV status to their male partners. All received information will be handled with greatest confidentiality by the staff involved in the study.

3.5 Subjects' withdrawal/removal from study

The study team tries to make all necessary efforts to keep the subjects in the study after their enrolment. The subject keeps his/her right to withdraw from the study at any time.
A subject might be withdrawn from the study by the investigator in case s/he is not complying with the protocol or there are adverse effects or the sponsor decides to interrupt the study. All withdrawals will be recorded.

Subjects withdrawn from the study by the investigator or upon their decision to stop participation in the study, regardless of the reason, unless the event occurs during a screening visit, will not be replaced.

4. Statistical Analyses

We used descriptive statistics to present the results from the questionnaire. Responses were summarized in terms of median and inter-quartile range (IQR) for quantitative data; frequency and percentage for qualitative data. Furthermore we looked into the association between two variables of interest by applying logistic regression or Chi-square exact test. Logistic regression was used to assess correlations between binary dependent variables, and other potentially important variables, such as demographic factors, sex and health factors. Chi-square exact test was used when logistic regression was deemed inappropriate, in case of very high prevalence of a variable for instance, and therefore only two binary variables could be tested.

The outcome of the FGD gave greater meaning and human dimension to the statistically analyzed numbers from the questionnaires. They pointed out details of the more common cases, and shew important exceptions. We used a narrative approach to present the results from the FGD, and we did not perform any formal analysis.

5. Results

Table 1: Demographic and health data

Demographic and health data	Male, n (%)	Female, n (%)	Total, n (%)
Gender	99 (50.8)	96 (49.2)	195 (100.0)
Age, years (median IQR)	40.1 (37.2, 44.4)	34.5 (30.8, 37.1)	37.1 (34.0, 40.3)
Education			
Did not complete primary school	0 (0.0)	1 (1.0)	1 (0.5)
Primary school	20 (20.2)	25 (26.0)	45 (23.1)
Secondary school, part 1	21 (21.2)	24 (25.0)	45 (23.1)
Secondary school, part 2	22 (22.2)	19 (20.0)	41 (21.0)
Vocational or technical training	14 (14.1)	8 (8.3)	22 (11.3)
Bachelor degree	18 (18.2)	16 (16.7)	34 (17.4)
Higher degree	2 (2.0)	2 (2.1)	4 (2.1)
Do not want to answer	2 (2.0)	1 (1.0)	3 (1.5)
Occupation			
Student	0 (0.0)	2 (2.1)	2 (1.0)
Employed	93 (94.0)	78 (81.3)	171 (87.7)
Unemployed	5 (5.1)	16 (16.7)	21 (10.8)
Do not want to answer	1 (1.0)	0 (0.0)	1 (0.5)
Income (Baht/month)			
<=5000	5 (5.3)	15 (18.8)	20 (11.5)
5001-10000	28 (29.8)	33 (41.3)	61 (35.1)
10001-19999	31 (33.0)	14 (17.5)	45 (25.9)
>=20000	19 (20.2)	10 (12.5)	29 (16.7)
Do not want to answer	11 (11.7)	7 (8.8)	18 (10.3)
Missing	-	1	1
Years of marriage/stable relationship			
Less than 1 year	2 (2.0)	3 (3.1)	5 (2.6)
1-5 years	14 (14.1)	23 (24.0)	37 (19.0)
6-10 years	31 (31.3)	38 (40.0)	69 (35.4)
More than 10 years	49 (49.5)	26 (27.1)	75 (38.5)
Do not want to answer	3 (3.0)	4 (4.2)	7 (3.6)
Missing	-	2	2

Having a child/hildren (Yes)	63 (63.6)	71 (74.0)	134 (68.7)
Number of children			
1	41 (65.1)	45 (63.4)	86 (64.2)
2	17 (27.0)	20 (28.2)	37 (27.6)
3	5 (8.0)	5 (7.0)	10 (7.5)
Missing	-	1	1
Number of intended pregnancies			100 (52.6)
Having a child before HIV diagnosis	38 (60.3)	37 (52.1)	75 (56.0)
Having a child after HIV diagnosis	25 (39.7)	34 (47.9)	59 (44.0)
Intended pregnancies before HIV diagnosis	28 (73.7)	26 (70.3)	
Intended pregnancies after HIV diagnosis	11 (44.0)	6 (17.7)	17 (28.8)
Having an HIV-positive child	9 (14.3)	12 (16.9)	21 (15.7)
HIV-positive children			22 (11.6)
Unintended pregnancies ended up with an HIV-positive child (n=100)			13 (13)
Years of living with HIV (median IQR)	10.2 (7.1, 13.3)	8.4 (4.5, 11.7)	8.5 (6.1, 12.8)
CD4 count, median IQR, n=193	465 (318-605)	483 (333-597)	472 (331-597)
CD4%	22 (18-28)	25 (19-29)	23 (18-29)
Viral load, copies/ml, median range	40 (<40-648,273)	40 (<40-310,918)	40 (<40-648,273)
ARV naive	0 (0.00)	2 (2.1)	2 (1.0)

Table 2: Desire to have a child/ more children

Desire for a child/more children	Male (n=99), n (%)	Female (n=96), n (%)	Total (n=195), n (%)
Already have a child (n=134)	n=63	n=71	n=134
Yes	16 (25.4)	16 (22.5)	32 (23.9)
No	44 (69.8)	48 (67.6)	92 (68.7)
I do not know	2 (3.2)	5 (7.0)	7 (5.2)
Do not want to answer	0 (0.0)	2 (2.8)	2 (1.5)
Missing	1	-	1
Do not have a child yet (n=60)	n=36	n=24	n=60
Yes	11 (30.6)	5 (20.8)	16 (26.7)
No	17 (47.2)	9 (37.5)	26 (43.3)
I do not know	5 (13.9)	7 (29.2)	12 (20.0)
Do not want to answer	2 (5.6)	2 (8.3)	4 (6.7)
Missing	1	1	2
Total (n=195)			
Yes	27 (27.3)	21 (21.9)	48 (24.6)
No	61 (61.6)	57 (59.4)	118 (60.5)
I do not know	7 (7.1)	13 (13.5)	20 (10.3)
Do not want to answer	2 (2.0)	4 (4.2)	6 (3.1)
Missing	2	1	3

Table 3: Correlation between desire to have a child/more children and demographic, sex and health factors

Demographic factors	Odds ratio	95% CI	p-value
Age	1.0	0.9, 1.0	0.479
Sex (male)	1.2	0.6, 2.4	0.594
Years of marriage/stable relationship			
Less than 1 year	Ref.		
1-5 years	0.3	0.02, 2.74	0.259
6-10 years	0.1	0.01, 1.15	0.065
More than 10 years	0.1	0.01, 0.97	0.047*
Education			
Primary school Secondary school, part 1 Secondary school, part 2	Ref.		
Vocational or technical training Bachelor degree Higher degree	2.3	1.1, 4.6	0.024*
Occupation (employed)	0.9	0.5, 1.6	0.781
Having a child	0.6	0.3, 1.2	0.168
Number of children	0.4	0.2, 0.9	0.034*
Having an HIV infected child	2.1	0.7, 5.9	0.242
Having CD4%<25	1.7	0.9, 3.5	0.119
Having viral load>5 log10	1.3	0.5, 3.4	0.634
Disclosure of HIV status to Main partner	0.6	0.2,2.0	0.523
HIV status of main partner	0.8	0.4, 1.6	0.396
Being sexually active	1.7	0.5, 6.4	0.557
Use of condom during vaginal sex			0.340**
Never	Ref.		
Sometimes	0.5	0.0, 9.8	0.648
Always	0.4	0.0, 6.0	0.483

Table 4: Sexual life

Sexual life	Male, n (%)	Female, n (%)	Total, n (%)
Having had sex in the past three months			
Yes	85 (85.9)	87 (90.6)	172 (88.2)
No	13 (13.1)	8 (8.3)	21 (10.8)
Do not want to answer	0 (0.00)	1 (1.0)	1 (0.5)
Missing	1	-	1
Sex frequency/week (n=172)			
< 1 time	23 (27.1)	27 (31.0)	50 (29.1)
1-2 times	49 (57.7)	44 (50.6)	93 (54.1)
3-4 times	7 (8.2)	6 (6.9)	13 (7.6)
> 4 times	3 (3.5)	3 (3.5)	6 (3.5)
Do not want to answer	2 (2.4)	7 (8.1)	9 (5.2)
Missing	1	-	1
Taking alcohol before sex (n=172)			
Always	1 ((2.4)	0 (0.00)	1 (0.6)
Sometimes	32 (37.7)	13 (15.0)	45 (26.2)
No	49 (57.7)	74 (85.1)	123 (71.5)
Do not want to answer	1 (1.2)	0 (0.00)	1 (0.6)
Missing	2	-	2
Taking drugs before sex (n=172)			
Always	0 (0.00)	0 (0.00)	0 (0.00)
Sometimes	2 (2.4)	0 (0.00)	2 (1.2)
No	80 (94.1)	85 (97.7)	165 (95.5)
Do not want to answer	3 (3.5)	2 (2.3)	5 (2.9)
Receptive anal intercourse (n=172)			
Yes	1 (1.2)	2 (2.3)	3 (1.7)
No	73 (85.9)	78 (89.7)	151 (87.7)
Do not want to answer	10 (11.8)	6 (6.9)	16 (9.3)
Missing	1	1	2
Condom use during vaginal sex (n=172)			
Always	73 (85.9)	62 (71.3)	135 (78.5)
Sometimes	7 (8.2)	10 (11.5)	17 (9.8)
Never	0 (0.0)	2 (2.3)	2 (1.2)
I do not practice vaginal sex	2 (2.4)	2 (2.3)	4 (2.3)

Do not want to answer	3 (3.5)	7 (8.1)	10 (5.9)
Missing	-	4	4
Condom use during anal sex (n=172)			
Always	8 (9.4)	4 (4.6)	12 (7.0)
Sometimes	0 (0.0)	0 (0.0)	0 (0.0)
Never	2 (2.4)	3 (3.5)	5 (2.9)
I do not practice vaginal sex	61 (71.8)	66 (75.9)	127 (73.8)
Do not want to answer	14 (16.5)	12 (13.8)	26 (15.1)
Missing	-	2	2
Condom use during oral sex (n=172)			
Always	10 (11.8)	9 (10.3)	19 (11.1)
Sometimes	2 (2.4)	2 (2.3)	4 (2.3)
Never	7 (8.2)	15 (17.2)	22 (12.8)
I do not practice vaginal sex	50 (58.8)	49 (56.3)	99 (57.6)
Do not want to answer	15 (17.7)	10 (11.5)	25 (14.5)
Missing	1	2	3
Sex with main partner			
Sex with main partner in the past three months (n=172)			
Yes	79 (92.2)	83 (95.4)	162 (94.2)
No	4 (4.7)	3 (3.5)	7 (4.1)
Do not want to answer	0 (0.0)	1 (1.2)	1 (0.6)
Missing	2	-	2
Main partner HIV-positive, responses for those who had sex with partner in the last three months (n=162)			
Yes (concordant couples)	59 (74.7)	44 (53.0)	103 (63.6)
No (discordant couples)	16 (20.3)	30 (36.1)	46 (28.4)
I do not know	3 (3.8)	7 (8.4)	10 (6.2)
Do not want to answer	0 (0.0)	2 (2.4)	2 (1.2)
Missing	1	-	1
Partner disclosure (n=162)			
Yes	70 (88.6)	72 (86.8)	142 (87.7)
No	6 (7.6)	10 (12.1)	16 (9.9)
I do not know	2 (2.5)	0 (0.0)	2 (1.2)
Missing	1	1	2
Reasons for non disclosure (n=16)			

I am afraid s/he might leave me	2	2	4
I am afraid I might hurt my partner	2	3	5
I tried, but s/he did not believe me	1	0	1
I take ARVs, so I think I cannot infect her/him	0	1	1
Other	1	2	3
Missing	0	2	2
Sex with occasional partner			
Sex with occasional partner in the past three months (n=172)			
Yes	20 (23.5)	1 (1.2)	21 (12.2)
No	59 (69.4)	78 (89.7)	137 (79.7)
Do not want to answer	3 (3.5)	4 (4.6)	7 (4.1)
Missing	3	4	7
No of occasional partners (n=21)			
1	10 (50.0)	0 (0.0)	10 (47.2)
2	1 (5.0)	0 (0.0)	1 (4.8)
> 2	5 (25.0)	0 (0.0)	5 (23.8)
Do not want to answer	1 (5.0)	0 (0.0)	1 (4.8)
Missing	3	1	4
Do you know the HIV status of your occasional partner (n=21)			
Yes	1 (5.0)	0 (0.0)	1 (4.8)
Sometimes	1 (5.0)	0 (0.0)	1 (4.8)
No	13 (65.0)	0 (0.0)	13 (61.9)
Do not want to answer	1 (5.0)	1 (100.0)	2 (9.5)
Missing	4	-	4
Did you disclose your HIV status to your occasional partner (n=21)			
Yes	4 (20.0)	0 (0.0)	4 (19.1)
Sometimes	2 (10.0)	0 (0.0)	2 (9.5)
No	10 (50.0)	0 (0.0)	10 (47.6)
Do not want to answer	1 (5.0)	1 (100.0)	2 (9.5)
Missing	3	-	3
Reasons for non disclosure (n=12)			
I am afraid s/he might leave me	4 (33.3)	0 (0.0)	4 (33.3)

I always use a condom and I decided not to tell her/him	7 (58.3)	0 (0.0)	7 (58.3)
Missing	1	-	1
Sexual life of male participants (n=85)			
Erection problems		NA	NA
Sometimes	21 (24.7)	NA	NA
No	62 (72.9)	NA	NA
Missing	2	NA	NA
Sex with men		NA	NA
Yes	0 (0.0)	NA	NA
>6m ago, but not at present	2 (2.4)	NA	NA
No	81 (95.3)	NA	NA
Missing	2	NA	NA
Sex with transgender		NA	NA
Yes	2 (2.4)	NA	NA
>6m ago, but not at present	1 (1.2)	NA	NA
No	80 (94.1)	NA	NA
Do not want to answer	1 (1.2)	NA	NA
Missing	1	NA	NA
Anal intercourse with female partner		NA	NA
Yes	3 (3.5)	NA	NA
No	81 (95.3)	NA	NA
Missing	1	NA	NA

Table 5: Contraceptive methods used (female participants, n=87)

Contraceptive use			
Yes	NA	84 (96.6)	NA
No	NA	3 (3.4)	NA
Contraceptive method (n=87)			
Male condom	NA	83 (95.4)	NA
Female sterilization	NA	35 (40.2)	NA
Male sterilization	NA	1 (1.1)	NA
Hormonal pill	NA	5 (5.7)	NA
Hormonal injection	NA	3 (3.4)	NA
Natural methods	NA	1 (1.1)	NA
Intrauterine device	NA	0 (0.0)	NA
Female condom	NA	0 (0.0)	NA
Dual contraception (condom + another method)	NA	42 (48.2)	NA

Table 6: Sterilization (n=195)

Demographic and health data	Male, n (%)	Female, n (%)	Total, n (%)
Sterilization offer	36 (36.4)	59 (61.4)	95 (48.7)

Table 7: Reproductive health (RH) service (n=195)

RH counseling offer	71 (71.7)	74 (77.1)	145 (74.4)
Evaluation of RH service, n=145			
Excellent	45 (63.4)	37 (50.0)	82 (56.6)
Good	20 (28.2)	31 (41.9)	51 (35.2)
Satisfactory	3 (4.2)	1 (1.4)	4 (2.8)
Do not want to answer	1 (1.4)	1 (1.4)	2 (1.4)
Missing	2	4	6
Need of RH service, n=195			
Yes	63 (63.6)	60 (62.5)	123 (63.1)
No	17 (17.2)	19 (19.8)	36 (18.5)
I do not know	6 (6.1)	5 (5.2)	11 (5.6)
Do not want to answer	11 (11.1)	8 (8.3)	19 (9.7)
Missing	2	4	6

12. Discussion

Our study reported reproductive and sexual health, and desire to have children in a group of HIV-positive men and women who are married or in a stable relationship and are mostly on successful HAART. As in other studies from various countries, we found that, after being diagnosed with an HIV infection, the desire for conception dropped significantly. Participants in our study were six times more likely to have a child as a result of an intended pregnancy before being diagnosed with an HIV infection, in comparison with after. There was a significant association between the desire for conception and the fewer years of being married and the lower number of living children. Men and women with higher levels of education tended to have a stronger desire for a child in our study. The possible explanation for this latter finding was that Thais particularly those with lower educational level generally did not question doctors' advice and few seek an alternative opinion. We did not find studies looking directly into the correlation between the level of education of the participants and their intention for a child. Though several studies, report a significant positive correlation between the knowledge of PMTCT or the information given about PMTCT and the desire for a child from an HIV-positive person. A study conducted in the USA and published recently, surprisingly found the contrary – only 15% of the women who had a desire for a child had a precise MTCT knowledge.

Sexual life is a core component for conception. People living with HIV are sexually active. In our study almost 90% of the respondents reported having sexual intercourse in the last three months. The assessment of the risk of the sexual behaviour in our group under study shew that most of the participants practised safe sex – 80% reported always using a condom with their main partner and another 15% sometimes. Dual contraception was the most effective method at present for achieving prevention of unintended pregnancies and prevention of sexually transmitted diseases, 50% of the female participants in our study reported use of dual contraceptive methods. Only a few respondents admitted to the use of drugs, alcohol or engaging in homosexual activities or with transgender persons. In our study population, men were more likely to have sex with a casual partner and the rate of condom use was less consistent when having sex with a casual partner. This poses a risk for community spread of HIV as well as spread to the steady partner. Indeed, in 2009, a significant rise in new infections in married Thai women was seen. Furthermore studies from several countries discuss extramarital sexual relations of HIV-positive men, and the connected risk for spreading HIV and other sexual transmitted diseases. It is therefore important to continue educational campaign to promote safe sex among HIV-positive heterosexual people in a stable relationship and in the community in general.

Contraception was mainly assessed among female participants. Over 95% of the women reported using a contraceptive method. Not surprisingly, the male condom was the most common method of choice. Similar findings were reported in other studies as well.

After the male condom, sterilization was the second most popular method of contraception. Sterilization, together with hormonal contraception and IUDs, was one of the three highly effective modern methods of contraception. It was also very much discussed in the context of HIV. The incidence of sterilization was dependent on the country or even preference of the specific hospital or doctor. In Thailand it is also a very popular method of contraception in the general population. It is estimated that 21.7% of all Thai women in reproductive age are with sterilization, and this figure goes up to 26.8% for Bangkok. Sterilization has many positive sides, such as no additional chemical and pill burden, no interaction with ARVs, no local side effects such as hypermennorhoea or dysmennorhoea. Although it might be a good choice for many women who no longer desire to have children, it is not a viable alternative for every HIV-positive woman. The problem is that it is practically an irreversible choice, which raises serious ethical questions, and the woman may regret it later in life. In our study, we had comparable results - 30% of the women who had been sterilized reported that they would like to have another child; furthermore, approximately half of the women to whom sterilization had been offered expressed some degree of discontent. On the other hand one third of the participants in our study were happy to have been offered this contraceptive

method. As recommended in the Royal College of Obstetricians and Gynaecologists (RCOG) guidelines, it is very important to perform appropriate counseling before the procedure in order to reduce the possible regret post sterilization. The guideline highlights the need for special attention to be paid when the woman is young, below 30 years of age, and when the procedure is offered in connection with a current pregnancy no matter the outcome – an induced abortion or delivery. The RCOG recommends at least one week interval between the end of the pregnancy and the procedure.

There are also alternative highly effective options for contraception. Though, in our study only eight women reported the use of hormonal contraception and none the use of an IUD. It is true that the use of hormonal contraception raises many questions in terms of HIV disease progression, pharmacokinetic interactions between hormones and antiretrovirals and, in particular, metabolic outcomes, but so far the results of research are inconclusive, and therefore we cannot withhold its use. On the other hand the IUD gives the possibility for long term reversible contraception with minor local side effects, such as hypermennhorea, which usually improve within two to three months of use. The research so far has shown that it is a safe choice for HIV positive women.

13. Conclusion and suggestion for further work

Our study has some limitations. The sample size was relatively small, and though some results were statistically significant, we cannot make further generalizations, as sexual life is very much culture dependent, and our results may not be applicable in all settings. The inclusion criteria limited participation in the study to people who are married or in a stable relationship, and it appeared the median age of the group was also relatively high. At 37 years, these participants might have already satisfied their reproductive needs some time in the past. Two thirds of the participants were recruited from an HIV research centre, and the rest from a PMTCT program, which might not reflect completely the situation in the general HIV-positive population in Thailand. Last, but not least, we did not have an HIV-negative group for comparison.

Despite the limitations of the study, the main outcome is important as it describes reproductive health and needs in a group of men and women with well controlled HIV. It is clear that Thai HIV-positive people are sexually active and many desire to have children. Therefore, there is a need for providing comprehensive reproductive health care services to this group of people. With HAART being the standard of care for prevention of mother to child HIV transmission in Thailand, the risk of HIV transmission is low (add PMTCT Thai guidelines). Therefore, men and women who desire to have children should be supported and counseled regarding safe ways to conceive. For men and women who do not want to have children, there is a substantial choice of contraceptive methods, allowing people to practise safe sex. Health professionals should give complete information to the HIV-positive people, so that they can take the decision, according to their life plan. We believe the analysis of the results of our study can contribute to improved reproductive health services offered to PLH in Thailand and other settings.

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