Work in Progress

STI/HIV Knowledge, Attitudes and Behavior: Evidence from the 2010 Transition to Adulthood Survey of Greater Jakarta

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Abstract

In this paper, young adults are defined as persons aged 20 to 34 years. The authors of this paper have recently completed a survey of 3006 young adults in Jakarta, Bekasi and Tangerang, the **2009/2010 Greater Jakarta Transition to Adulthood Survey**. This study, the first comprehensive survey of transition to adulthood conducted in Indonesia, is funded by the Australian Research Council, WHO and the National University of Singapore. Questions relating to sexuality and risk taking behaviours were asked using a self administered questionnaire to insure confidentiality. The objectives of this paper are to examine sexual behaviours, knowledge and source of information on STI/HIV/AIDS, and health seeking behaviour relating to STI/HIV. Preliminary results showed that 11 per cent of never married respondents and around 10 per cent of ever married respondents had had premarital sex. Among the never married, only 5 percent of females reported experience of sexual intercourse, compared to 16 percent of males. Though the authors speculate that incidence of premarital sex among respondents may be under reported, it is still higher compared to the *2007 Indonesian Young Adults Reproductive Health Survey* which reported 6.4% among males and 1.3% among females. Reports of self masturbation and oral sex were significantly higher among males, though almost one third of males and and one third of female respondents reported masturbation with a partner.

Though over one in seven respondents have not heard of HIV/AIDS, levels of knowledge were higher among the younger cohorts, and among females. In this regard, education level was also a very important determinant. Whereas one third of those with primary school or less had never heard of HIV/AIDS, the equivalent figure was only 7 % for those with a Bachelor degree or higher. Seventeen per cent of respondents know someone with HIV/AIDS, while 76 respondents have ever been tested and 6 respondents tested positive. Level of knowledge that HIV can be transmitted from sexual intercourse without a condom, from sharing needles and from blood transfusions is quite high (~79-84%). However for activities such as kissing, sharing food utensils, from mosquito bites etc there was some degree of confusion with a significant percentage believing that HIV could be transmitted in these ways, but also a high percentage said that they ‘did not know’ about these things.

Introduction: Indonesia, sexuality and HIV/AIDS

In this study young people are defined as those aged 20-34 years old regardless of their marital status. The ***2010 Greater Jakarta Transition to Adulthood Survey***, was a representative sample survey of 3006 respondents residing in the city of Jakarta, and the connected cities of Tanggerang and Bekasi, to the west and east. This is the first comprehensive study of transition to adulthood conducted in Indonesia. In this paper data on STI/HIV/AIDS knowledge and health seeking behaviour is analysed. This specific age group represents a large proportion of the Indonesian population -- They number more than 60 million -- They constitute the backbone of the economy as they are workers and many of them are students at the diploma or university level who will be the leaders of the future for government and business. Young people are also the *engine of social change* as their needs and demands energize markets, the economy, fashion trends, and the whole range of political, religious, and social attitudes found in this, the fourth most populous country in the world.

The impact of globalisation has fostered strong demands among these young people to connect to people around the world. There is a generation of young people who are always tied to their computer, surfing the internet, updating their Facebook, and contributing to political or social blogs. They are constantly checking their mobile phones for SMS messages, and whenever they venture out they refer to online GPS information and can be seen on their motorbikes or in buses listening to the latest music, or to religious lectures on their Ipod. The necessity of these technologies to connect to their friends, love ones, family and relatives around the world have created a huge market for all the modern gadgets that young people crave. They are skilled beyond the comprehension of their elders, and open to each new trend with a curiosity that puzzles their parents. The development of information technology has placed young people in a time without a narrow sense of space or geographical boundary and made them very dependent on technology and the money needed to obtain it.

Historically the 20 to 34 age group, earlier referred to as *pemuda*, have also led political demonstrations starting before Indonesian Independence initiated by the *Boedi Oetomo*group in 1908, through the *Malari* movement of January 1974—right through the demonstrations in 1998 that brought down the Suharto New Order regime. This age group is constantly active fighting and demonstrating against corruption and on behalf of the poor and oppressed. Since the start of the Reform Era in 1998-9, through to the present time young Indonesians have assumed important positions in politics, religious parties, entertainment industry, work force, businesses, NGOs, and voluntary work. Most important many outspoken young Indonesians have not been afraid to reveal their sexual identity, and there are many examples of openly Gay and Lesbian activists working in HIV/AIDS and drug use NGOs. Some have publicly announced their HIV/AIDS status and are actively combating and campaigning safe sex messages.

Unfortunately culturally and in the speeches of conservative politicians, young Indonesians are depicted as being problem free,so long as they cleave to the orthodox traditional norms of religion and culture. In contrast young people themselves crave independence and the ability to make decisions regarding the important decisions in their lives.

In demography the term *demographically dense phase* is used to describe this age group because of all important demographic decisions that they have to make regarding sexual

debut, education, work, marriage and fertility Rindfuss, 1991). In reality young Indonesians struggle as they face unprecedented choices, and rigid barriers to many of the decisions they would prefer. The entry into marriage occurs nearly a decade later than the age of their grandparents marriage. They are allowed to find their own life partners, but are expected to be abstinent during the years of education and early work when they are gathering resources needed to sustain a marital union. During this age the challenges of reproductive health and sexuality issues, and family planning technology seem insuperable, with the government and their elders mouthing platitudes and lacking any empathy for the unique situation of the young adults today. The policy agenda dealing with this age group is contrary to the practical realities and personal rights of the young. In particular the policies relating to sexual and reproductive health services for those who are still single have been unrealistic. That is why this paper is written and focuses on sexuality behaviours, STDs/STI/HIV/AIDS and health seeking behaviours as difficulties in negotiating the decisions around sexuality in this age group still dominates aspects of their life.

Various studies have indicated that young people in this age group often engage in premarital sex and some of them engage in more risky behaviours of failure to use condoms, failure to use contraception, and participation in the commercial sex industry as clients or workers. For a significant number in the age group risky behaviour may lead to the practice of unsafe abortion (Widyantoro, 1992; Xenos and Kabamalan, 1998; Bennett, 2001; Utomo et al, 2003; Bennett, 2005; Suparno, 2005ab; Prasetyo et al, 2007ab; Rahman et al., 2008; Utomo I. and McDonald, 2009 and 2010).

The development of research in Indonesia on study related to sexuality specifically young people's sexuality, premarital sex and premarital abortion started in the early 1970s (Sadli and Biran, 1971; Sarwono, 1981; Singarimbun, 1991; Widyantoro, 1992, 1996; Murray, 1993; Utomo, 1998; Bennett, 2001, 2005; Situmorang, 2001; Butt et al., 2002; Purdy, 2006; Diarsvitri, 2009; Mokui, Utomo, McDonald Forthcoming; Diarsvitri, Utomo and Neeman, Forthcoming;). In the 1970s study on young people sexuality was still very sensitive and the government exerted very strong control on research permits, thus it is not surprising that during that period, researchers were often sanctioned and expel from school if the study results were disseminated publically (Utomo, 1998). After the late 1990s especially when HIV/AIDS started to emerge in Indonesia, these studies of started to flourishe (Utomo et al, 1996, 1997, 1998, 2001; Suparno, 2003). Two leading centres in Jakarta focusing on HIV/AIDS and drug use research are the Centre for Health Research, University of Indonesia and the Atmajaya University.

In this study, young adults' sexuality and health seeking behaviour is analysed. Sexual orientation, life time sexual partners, condom use, knowledge on STI and HIV/AIDS are explored.

Methodology and analysis

Young people in this paper is defines as those aged 20-34 years old, regardless of their marital status. The ***2010 Jakarta Transition to Adulthood Survey (N=3006)*****,** is based on two standardized questionnaires. The first questionnaire covers questions relating to demographic, social, cultural, education, work, migration, gender, health and well-being, and attitudes and values. The second questionnaire consists of reproductive health and sexual behaviour questions.

The sampling process involved a two-stage cluster sample using the PPS method. In the first stage, 60 *Kelurahan* (District) were selected using PPS. In the second stage, five neighbourhoods (*Rukun Tetangga/RT*) were chosen within each selected *Kelurahan* by systematic random sampling. The 300 selected RT were then censused and mapped by trained interviewers. The census collected information on the age, sex, marital status and relationship to head of household. From the census, a listing of all eligible respondents (aged 20-34) living in the *Rukun Tetangga* was compiled. Eleven eligible persons were then selected by simple random sampling from the eligible RT population. Thus, 3,300 names were selected for interview with the aim of obtaining a sample of 3,000 allowing for refusals and non-contact. These names were allocated to interviewers with a standard interviewer load consisting of 110 named individuals. On average the first questionnaire took about 45 minutes to an hour, while the second questionnaire is self administered, though for those who were having difficulties, the respondent is offered to be interviewed.

The data was analysed using descriptive bivariate analysis as well as multivariate regression analysis[1]. The main objective was to examine HIV/AIDS and STI knowledge and health seeking behaviour as well as sexuality behaviour and condom usage.

Findings

Knowledge of HIV/AIDS and STIs

HIV infections are spread in a population through sexual transmission of HIV infections to successive generations. An essential prerequisite for young adults to be able to protect themselves from the risk of infection is to have adequate and accurate knowledge of the methods of transmission (UNGASS 2009). In this study a similar method has been employed to assess the overall knowledge of HIV/AIDS and STI.

Overall awareness of HIV/AIDS was much higher compared to that of STIs. While 15 per cent of respondents said that they had never heard of HIV/AIDS , a much higher 60 per cent stated that they had never heard of sexually transmitted diseases. Males were more likely to have heard of both HIV/AIDS and STIs compared to women. Younger people were slightly more likely to have heard of HIV/AIDS but slightly less likely to have heard of STIs. Education was strongly related to knowledge of both HIV/AIDS and STIs with respondents with higher levels of education being consistently more likely to have heard of both HIV/AIDS and STIs.

[1] Using STATA 11.1

Table 1. Percentage of knowledge of AIDS and STIs, by selected demographic characteristics, Greater Jakarta, 2010

	Ever heard of AIDS		Ever heard of STIs	
	Yes	No	Yes	No
	%	%	%	%
Total	**84.6**	15.4	**39.0**	60.1
Sex				
Male	**86.2**	13.8	**43.0**	56.1
Female	**83.5**	16.5	**36.2**	63.0
Age group				
20-24	**86.5**	13.5	**36.5**	62.6
25-29	**85.2**	14.8	**40.5**	58.3
30-34	**82.3**	17.7	**40.0**	59.4
Highest education				
Primary school or less	**67.0**	33.0	**21.5**	78.1
Junior high school	**75.6**	24.4	**27.4**	70.8
Senior high school	**89.1**	10.9	**39.5**	59.6
Certificate	**92.6**	7.4	**52.3**	47.7
Bachelors+	**93.5**	6.5	**64.0**	35.7

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Awareness of transmission methods

Respondents who indicated that they were aware of HIV/AIDS were asked about whether they thought specific behaviours could transmit the infection. Some of the listed behaviours were actual means of transmission (e.g. sexual intercourse without a condom) whereas others were misconceptions (e.g. sharing food utensils). The percentage of respondents who said that a specific activity was a method of transmission is shown in Table 2. Overall there was a relatively high level of correct identification of actual means of transmission, although there was a greater degree of confusion or hesitancy when it came to the common misconceptions. For example over one third of respondents did not know if HIV/AIDS could be transmitted from mosquito bites. Even among the misconceptions however, a relatively high percentage correctly identified that three key behaviours: looking after someone who has HIV/AIDS, holding hands with someone with the disease or sharing a toilet where *not* means of transmission.

Belief in misconceptions about HIV/AIDS can have a critical effect on behaviour. As UNGASS (2009:53) notes for example, 'the belief that HIV is transmitted through mosquito bites can weaken motivation to adopt safer sexual behaviour'. It should be remembered that the answers shown below only refer to respondents who had ever heard of HIV/AIDs (i.e. the responses are somewhat biased since excluding the 15 per cent who had never heard of the disease at all).

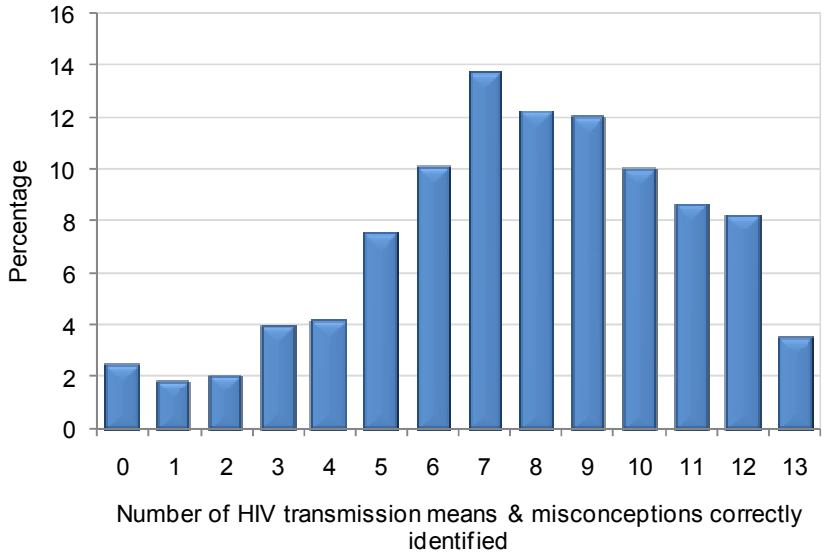
Table 2. Percentage of respondents who believed that HIV/AIDS could be transmitted from different activities (among respondents who had ever heard of HIV/AIDS), Greater Jakarta, 2010

Activity	Yes	No	Don't know	No answer	Total
Actual means of transmission					
Sexual intercourse without a condom	**84**	9	6	1	100
Sharing needles	**82**	10	7	1	100
Blood transfusion	**79**	11	10	1	100
Tattoo needle	**73**	13	14	1	100
Body piercing	**65**	16	18	1	100
Sharing shaving blade	**35**	36	29	1	100
Misconception					
Kissing	47	**32**	20	1	100
Drinking from the same cup	35	**42**	22	1	100
Sharing food utensils	33	**44**	23	1	100
From mosquito bites	23	**40**	36	1	100
Looking after someone who has HIV/AIDS	16	**62**	21	1	100
Holding hands with somebody who has HIV/AIDS	11	**71**	17	1	100
Sharing a toilet	10	**60**	29	1	100

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

To get a quantitative measure of the level of knowledge about HIV/AIDS (among those who had ever heard of HIV/AIDS) the number of 'correct' answers in terms of transmission methods were summed. A correct answer would be a positive identification of an actual means of transmission, and a negative answer of 'no' to a misconception such as that HIV/AIDS can be passed on from kissing. From the 13 behaviours and transmission methods listed in the table above, the distribution of number of correct answers is shown in Figure 1

Figure 1. Level of knowledge about HIV/AIDs (among respondents who had ever heard of HIV/AIDs) based on correct identification of true and false transmission methods



Further information showing the average number of correct answers by selected demographic characteristics is also shown in Table 3. The average number of correct answers (out of the maximum of 13) was relatively high at 7.7. While there were no significant age differences in the average number of correct answers, men scored higher than women and those with higher levels of education also scored higher than those with lower levels of education.

Table 3. Average number of HIV/AIDS transmission methods correctly identified as true or false, by selected demographic characteristics, Greater Jakarta, 2010.

	Mean
Total	7.7
Sex	
Males	8.1
Females	7.4
Highest education	
Primary or less	6.0
Junior high school	6.5
Senior high school	7.8
Certificate	9.1
Bachelors+	9.1
Age group	
20-24	7.6
25-29	7.7
30-34	7.7

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Table 4. Percentage of respondents who believed that STIs could be transmitted from the following activities (among respondents who had ever heard of STIs), Greater Jakarta

Activity	Yes	No	Don't know	Not answered	Total
	%	**%**	**%**	**%**	**%**
Sexual intercourse without using a condom	76	9	6	9	100
Sharing needles	59	27	12	2	100
Blood transfusion	58	25	15	1	100
Tattoo needle	52	31	16	1	100
Body piercing	47	33	18	2	100
Kissing	35	47	16	2	100
Sharing shaving blade	27	48	23	2	100
Drinking from the same cup	23	58	16	3	100
Sharing food utensils	18	57	15	10	100
From mosquito bites	17	53	29	2	100
Sharing a toilet	16	58	24	2	100
Looking after somebody who has	11	73	15	1	100
Holding hands with somebody who has STI	6	81	12	1	100

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Multivariate analysis

To assess the determinants of level of knowledge about HIV/AIDS two separate logistic regressions were run. Model 1: The first model included the whole sample and examined the odds of ever having heard of HIV/AIDS. The dependent variable was defined as being equal to zero if the respondent indicated that they had never heard of HIV/AIDS and equal to one if they had heard of the disease. Model 2: The second model was restricted to the 85 per cent of the sample who had heard of HIV/AIDS. This model assesses the level of knowledge about HIV transmission based on the number of correct answers they gave to the various questions on transmission methods. A dummy dependent variable was used to identify those with a high level of knowledge about HIV transmission. High knowledge was defined as correct identification of 9 or more out of the 13 transmission methods listed.

The results are shown in Table 5 below. In terms of ever having heard of HIV/AIDS, there was no significant sex difference between males and females in Model 1. However, among those who had heard of HIV/AIDS women were less likely to have a high level of knowledge about HIV transmission compared to males. The finding that females have lower levels of knowledge about HIV/AIDS is different from the results of the Indonesian Demographic and Health Survey 2008, which found that female respondents had a better understanding about HIV than male respondents (National AIDS Commission Republic of Indonesia 2009). Those results however were limited to ages 15-24, and covered a wider geographical area than this survey.

An individuals' level of education was a very important factor, both in terms of whether they had ever heard of HIV/AIDS, and their level of knowledge about transmission methods. The odds of someone with who had completed senior high school ever having heard of HIV/AIDS were 2.48 times higher than the odds of someone with junior high school having heard of the disease. For those with a university degree, the respective odds were 4.72 times higher. Controlling for the other factors in the model, age was not a significant predictor of having heard of HIV/AIDS, although it had some effect on the level of knowledge among those who had heard of HIV/AIDS. Compared to the reference category aged 25-29, those aged 30-35 were significantly more likely to have a higher level of knowledge about the correct transmission methods. Currently married people had lower odds of having high levels of knowledge about transmission routes, compared to their unmarried counterparts. Religion was not an important predictor in either model. For predicting high level of knowledge (Model 2), not surprisingly the more number of sources that respondents had learnt about HIV/AIDS from the more informed they were about transmission methods.

Table 5. Logistic regression of ever having heard of HIV/AIDS (Model 1) and having a high level of knowledge about HIV transmission (Model 2), Greater Jakarta, 2010

	Ever heard of HIV/AIDS	High level of knowledge about HIV transmission
	Model 1	Model 2
Sex		
Male (ref)	--	--
Female	0.90	0.69***
Highest education		
Primary school or less	0.68***	0.63**
Junior high school (ref)	--	--
Senior high school	2.48***	2.11***
Certificate	4.63***	4.70***
Bachelors or higher	4.72***	3.56***
Age group		
20-24	1.12	0.85
25-29 (ref)	--	--
30-35	0.94	1.34**
Married		
Not married (ref)	--	--
Married	1.23	0.80**
Religion		
Muslim (ref)	--	--
Protestant	1.55	1.04
Catholic	0.76	1.08
Other	2.44	1.26
Number of sources of HIV/AIDS information		
0-5		0.81*
6-10 (ref)		--
11-16		1.26**
Number of observations	2,982	2,325
Prob>chi2	<0.001	<0.001

Note: *p<0.10; **p<0.05; *** p<0.01
Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Sources of information

Respondents who had ever heard of HIV/AIDs were asked whether they had received information about the disease from a list of different sources of information. The same procedure was repeated for STIs. Consistent with research from other Asian countries on the sources of HIV/AIDS-related knowledge among young adults, the mass media is the main source of information (Wong, *et al.* 2008). Television had been a source of information about HIV/AIDS for 96 per cent of those who knew about HIV/AIDS, and a source of information about STIs for 76 per cent of those who had ever heard of STIs. The three sources of information from which information on both types of conditions was received was the television, newspapers and peers. Given the popularity of mass media in gaining information about HIV/AIDS, this may be one of the most effective ways that education about prevention methods can be delivered to young adults from all sections of society (Wong*, et al.* 2008).

Table 6. Percentage of respondents who had received information about HIV/AIDs from the specified list of sources (among respondents who had ever heard of HIV/AIDS), by age and sex, Greater Jakarta 2010

	Males		Females		Total
Source of information	20-24	25-34	20-24	25-34	
Television	97	96	96	97	96
Newspaper	79	77	69	68	72
Peers/Friends	77	69	75	60	68
Magazine	66	61	64	57	61
Radio	65	63	65	53	60
Poster/leaflet/brochure	70	64	60	51	59
Hospital	53	47	50	46	48
School text books/lesson	64	40	60	35	46
A government department	50	46	44	37	43
Internet	56	38	50	29	40
Parents/family members	43	36	47	35	39
Religious associations	45	40	37	31	37
A doctor or private health-clinic	35	34	34	33	34
Work place	31	36	28	29	31
University or other tertiary training institution	37	25	37	20	27
NGO	33	23	26	17	23
Total number of observations	404	656	445	995	2,500

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Table 7. Percentage of respondents who had received information about STIs from the following sources (among respondents who had ever heard of STIs), Greater Jakarta

	Males		Females		Total
Source of information	**20-24**	25-34	20-24	25-34	
Television	75	75	80	76	76
Peers/Friends	72	71	72	62	68
Newspaper	66	65	63	62	64
Magazine	52	58	59	54	56
Radio	57	59	57	51	55
Poster/leaflet/brochure	55	54	52	43	49
Hospital	46	45	52	43	46
Internet	57	44	53	35	44
School text books/lesson	53	36	59	30	40
Parents/family members	38	34	45	39	38
A government department	43	34	41	29	35
A doctor or private health-clinic	34	35	39	33	34
Religious associations	38	37	32	25	32
Work place	26	36	31	29	31
University or other tertiary training institution	37	28	43	23	30
NGO	33	25	28	19	24
Total number of observations	181	350	176	452	1,159

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

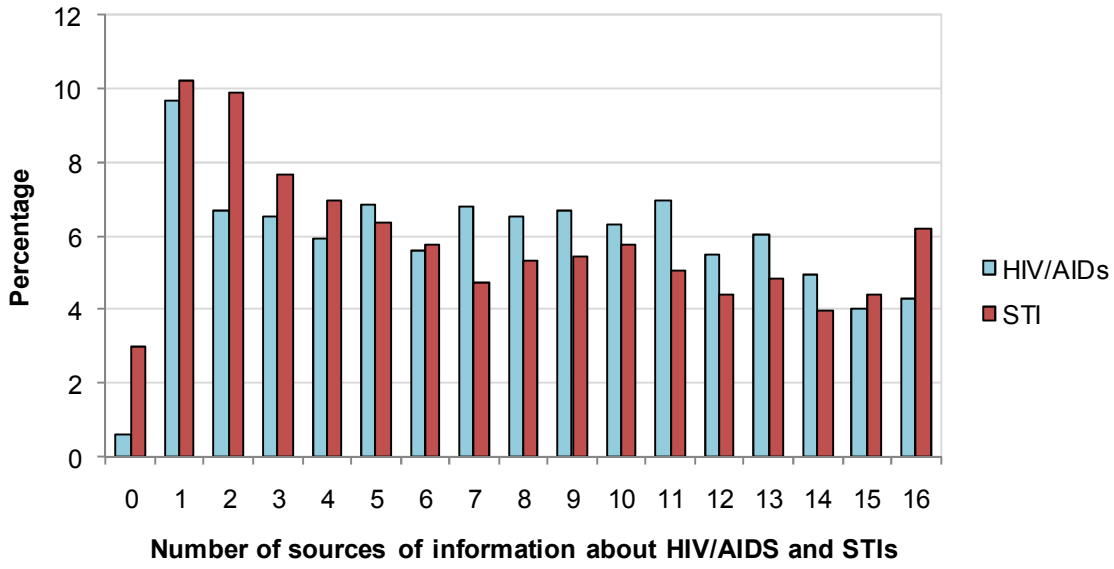
The *average* number of sources of information through which information about HIV/AIDs and STIs was received is shown in . Table 8 . Males identified more sources of information than females, as did those with higher levels of education and younger individuals.

Table 8. Average number of sources of information through which information about HIV/AIDS and STIs was received, Greater Jakarta, 2010

	AIDS	**STIs**
	Mean	Mean
Total	7.7	7.2
Sex		
Males	8.3	7.5
Females	7.3	7.0
Highest education		
Primary or less	4.6	4.8
Junior high school	5.5	5.1
Senior high school	8.0	7.1
Certificate	9.7	8.4
Bachelors+	10.7	8.9
Age group		
20-24	8.7	8.0
25-29	7.6	7.2
30-35	7.0	6.6

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Figure 2. Number of sources of information about HIV/AIDS or STIs, Greater Jakarta, 2010



Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Personal experience with HIV/AIDS and STIs

This next section deals with people's personal experience with HIV/AIDS and STIs. Again the analysis was restricted to those who had ever heard of HIV/AIDs and STIs respectively.

Around 17 per cent of respondents personally knew someone with HIV/AIDs, and 19 per cent knew of someone with an STI. Males were more likely to have known someone with either condition compared to females, as were younger individuals. There was no clear education pattern although, those with the highest and lowest education levels were the least likely to know someone with either condition.

Table 9. Percentage of respondents who personally know someone with HIV/AIDS or an STI (among those with knowledge of HIV/AIDS or STIs), Greater Jakarta, 2010

	HIV/AIDS		STI	
	Yes %	Total N	Yes %	Total N
Sex				
Male	19.1	1,059	21.3	527
Female	15.6	1,443	16.6	628
Education				
Primary or less	11.6	267	13.1	84
Junior high school	14.1	377	20.4	137
Senior high school	19.4	1,287	22.4	576
Certificate	20.1	239	14.3	133
Bachelors +	14.0	329	13.0	224
Age group				
20-24	18.5	851	20.2	361
25-29	17.4	809	17.5	388
30-35	15.3	842	18.5	406
Total	17.1 (N=427)	2,502	18.7 (N=216)	1,155

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

HIV/AIDS and STI testing

Only 3 per cent (N=76) of respondents who had ever heard of HIV/AIDS had ever been tested for themselves, and only 3.6 per cent (N=42) of those who had heard of STIs had been tested for them.

Table 10. Characteristics of respondents reported being tested for HIV/AIDs or and STI (among those with knowledge of HIV/AIDS or STIs), Greater Jakarta

	HIV/AIDS		STI	
	Tested (%)	Total N	Tested (%)	Total N
Sex				
Male	4.3	1,059	4.6	527
Female	2.1	1,443	2.9	628
Education				
Primary or less	0.8	267	3.6	84
Junior high school	1.3	376	2.9	137
Senior high school	2.6	1,288	2.8	576
Certificate	5.4	239	6.0	133
Bachelors +	6.7	329	4.9	224
Age group				
20-24	2.2	850	3.1	361
25-29	2.8	810	2.6	388
30-35	4.0	842	5.2	406
Total	**3.0 (N=76)**	**2,502**	**3.6 (N=42)**	**1,115**

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Six respondents indicated that they were HIV positive and seven that they had an STI. Although the number of cases is very small, their sex, education and age characteristics are shown in Table 11.

Table 11. Characteristics of respondents who had tested positive for HIV/AIDS or STIs

	HIV/AIDS	STI
Sex		
Male	4	5
Female	2	2
Education		
Primary or less	1	3
Junior high school	-	1
Senior high school	4	3
Certificate	-	-
Bachelors +	1	-
Age group		
20-24	-	1
25-29	1	1
30-35	5	5
Total	**6**	**7**

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Treatment of HIV/AIDS and STIs

Treatment of HIV/AIDS

Respondents who were HIV positive were asked where they received treatment. Table 12 shows the places where treatment was received. Three people received treatment in hospitals, and two each in public health clinics and private clinics.

Table 12. Source of HIV/AIDS treatment, Greater Jakarta, 2010

	Yes	No	Missing	Total
Hospital	3	1	2	6
Public Health Clinic (Puskesmas)	2	1	3	6
Private clinic	2	1	3	6
NGO	1	2	3	6
Private/personal doctor	1	2	3	6

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

The table above has to be interpreted with caution however, not only because of the small sample size but also because the numbers presented in the table above add up to more than 6 cases overall because some respondents received treatment in multiple places. Two of the people gave no answers to any of the questions, whereas others responded yes to multiple places of treatment.

Cost of HIV treatment

Those who were HIV positive were also asked if they received their medicine at a reduced cost or for free. Out of the 6 patients, 3 of them stated that they received their medicine at a reduced cost, and 3 did not provide an answer to the question.

Treatment of STIs

As with the HIV positive people, those who had STIs were also asked about where they received treatment. The answers are shown in Table 13. As before the total number of sources used adds up to more than 7 (which is the number of people who had STIs), because some respondents gave multiple answers.

Table 13. Source of STI treatment, Greater Jakarta, 2010

	Yes	No	Missing	Total
Hospital	3	3	1	7
Public Health Clinic (Puskesmas)	2	4	1	7
Private clinic	2	4	1	7
NGO	0	6	1	7
Private/personal doctor	3	4	0	7
Traditional healer (Dukun)	0	6	1	7
Pharmacy	3	3	1	7

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Those who had STIs were asked if they had ever felt stigmatized or discriminated while seeking or obtaining medical treatment for their sexual infections. All 7 respondents respondent that they had answered no to this question.

Sexual experience and condom use

Another important indicator related to safe sex is the percentage of people who have sex at an early age. UNGASS uses an indicator of the percentage of young men and women aged 15-24 who have had sexual intercourse before the age of 15, however it notes that in countries where very young people have sex before the age of 15 alternative indicators such as the sex before age 18 can be used instead. It is important to examine both actual sexual practices as well as knowledge, because even high levels of knowledge about HIV/AIDS may not necessarily translate to safe sexual practices among young adults.

From the total sample, 1,787 respondents or just over 60 per cent indicated that they had ever had sex. Not surprisingly there were large differences in sexual experience by marital status. Of those who had never been married only 11 per cent had ever had sex, compared to 98 per cent of those who were ever married. Roughly 10 per cent of those who had ever been married and had had a sexual experience were not married at the time of first sex however. Among the never married respondents, males were considerably more likely to have had sex compared to women, as were those in the older age groups.

Table 14. Percentage of respondents who have ever had sex, by marital status, Greater Jakarta, 2010

	Never married		Ever married	
	%	Total Nin group	%	Total N in group
Total	11.3	1,287	97.6	1,669
Sex				
Male	15.7	732	98.0	497
Female	5.4	555	97.4	1,172
Age group				
20-24	9.2	768	98.6	213
25-29	12.3	357	97.3	597
30-35	18.5	162	97.6	859
Married at the time of first sex			90.2	1,643

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Age at first sexual intercourse

The survey also asked respondents to report the age at which they had their first sexual intercourse. Overall, the age at first sexual intercourse was 23.2 for males and 21.5 for females. There were however some differences according to whether or not the person was married at the time, and also their highest level of education. On average those who were not married at the time, and who had lower levels of education were experienced their first at younger ages.

Table 15. Age at first sexual intercourse for males and females, Greater Jakarta, 2010

	Males	Females
Marital status at the time		
Not married	21.2	20.4
Married	24.4	21.6
Highest education		
Primary or less	22.3	19.4
Junior high school	23.0	20.3
Senior high school	23.4	22.3
Certificate	23.3	23.3
Bachelors+	24.9	25.1
Total	23.3	21.5

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

The relationship between age at first sexual intercourse and education level is explored further in the life table survival functions plotted for males in Figure 3 and for females in Figure 4. For both males and females there is a clear education gradient to age at first sexual intercourse, but the effect of education is considerably stronger for females. Given that the overall majority of first sexual intercourses occurred within marriage, the relationship between age at first sexual intercourse and education for females is in large part a reflection of the education gradient in age at first marriage since women with lower education are more likely to marry at a younger age.

Figure 3. Survival function of first sexual intercourse by education level, males, Greater Jakarta, 2010

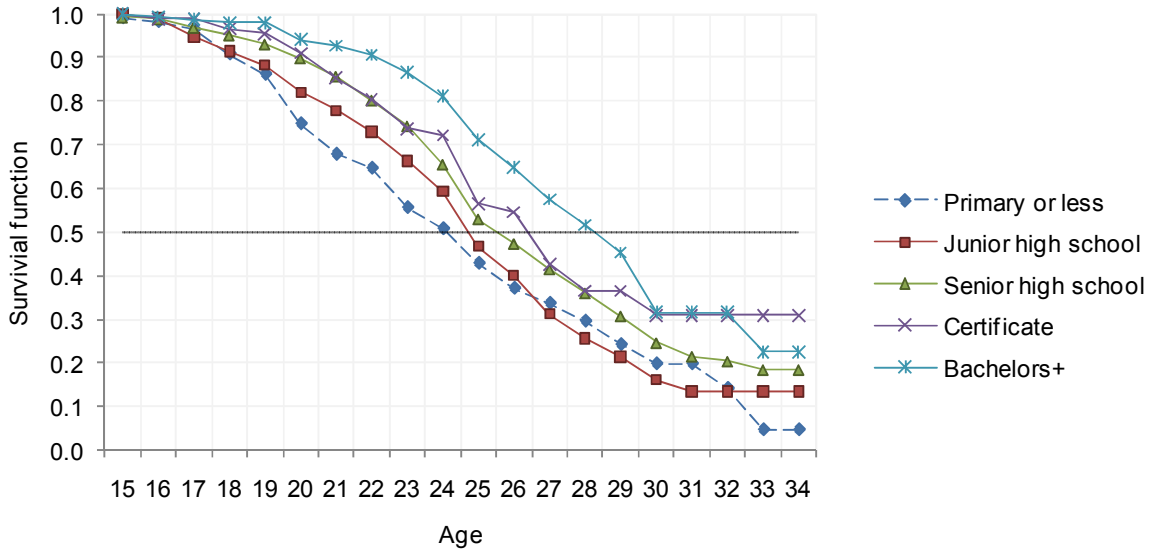
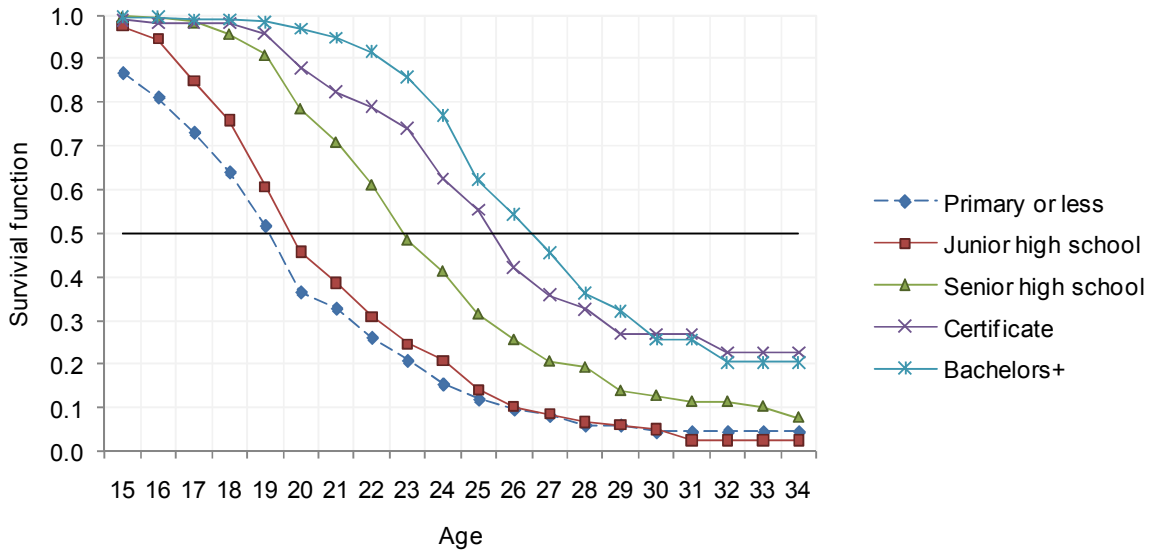


Figure 4. Survival function of first sexual intercourse by education level, females, Greater Jakarta



First sexual intercourse: Level of knowledge about safe sex and sexual health

Respondents who had ever had sex were asked whether they felt that they had enough knowledge about safe sex and sexual health at the time of the first sexual encounter. Table 16, shows the different levels of self-rated knowledge by sex, by whether the respondent was married at the time and by highest education.

As the last row in the table shows, only one third felt that they had adequate knowledge about safe sex and sexual health at the time of the first sexual intercourse, with the remaining 66 per cent either feeling that they had *not enough knowledge* or *no knowledge at all*. Males were more likely to feel that they had adequate knowledge at the time, as were those with higher levels of education. For example only 17 per cent of those with primary school education said they had adequate knowledge, compared to 57 percent of those with a Certificate or University degree. There was no significant difference in whether or not the respondent was married at the time of first sex or not.

Table 16. Level of knowledge about safe sex and sexual health at the time of the first sexual encounter, Greater Jakarta, 2010

	Enough	Not enough	Had no knowledge	Total	
	%	%	%	%	N
Sex*					
Males	40	42	19	100	*602*
Females	31	40	28	100	*1,183*
Married at the time of first sex					
Yes	34	40	26	100	*1,495*
No	34	43	22	100	*289*
Age at first sex*					
<18	17	31	52	100	*178*
18-21	27	45	29	100	*636*
22+	42	40	18	100	*960*
Highest education*					
Primary or less	17	35	48	100	*327*
Junior high school	21	42	38	100	*380*
Senior high school	39	45	16	100	*782*
Certificate	57	35	8	100	*128*
Bachelors+	57	35	8	100	*166*
Total	34	41	25	100	*1,779*

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

First sexual intercourse: Condom use

Respondents were also asked about whether they used contraception during the time of the first sexual encounter. As shown in Table 17, the vast majority (90 per cent), of respondents did not use any form of contraception during the first sexual encounter. Men were more likely to have used a condom, as were those who were not married at the time of first sex as well as those with higher education levels.

Table 17. Use of contraception at the time of the first sexual encounter, Greater Jakarta, 2010

	Used condom	Used other contraception	Did not use anything	Total %	Total N
	%	%	%	%	N
Sex*					
Males	14	2	85	100	*6*
Females	4	3	93	100	*1*
Married at the time of					
Yes	2	3	95	100	*1*
No	32	2	66	100	*2*
Age at first sex					
<18	6	4	90	100	*1*
18-21	8	3	89	100	*6*
22+	6	2	92	100	*9*
Highest education*					
Primary or less	2	2	95	100	*3*
Junior high school	5	4	91	100	*3*
Senior high school	8	2	90	100	*7*
Certificate	13	1	86	100	*1*
Bachelors+	12	2	87	100	*1*
Total	7	3	90	100	*1,780*

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Multivariate analysis

Two aspects of first sexual experience were investigated in further detail using multivariate logistic regression. Model 1: The first model modelled the respondents own perceived level of knowledge about safe sex and sexual health at the time of first sexual intercourse. In this case the dependent variable was defined as equal to 1 if the respondent said they had no knowledge at the time of first sex, and equal to 0 if they had some knowledge (but not enough) or if they felt they had adequate knowledge. In this model therefore an odds ratio over 1 indicates a higher odds of not having any knowledge about safe sex at all, compared to the base or reference category. Model 2: The second model modelled condom use during first sexual intercourse. The dependent variable was equal to 1 if the respondent used a condom during first sexual intercourse, and equal to zero otherwise. An odds ratio over 1 indicates a higher odds of using a condom compared to the reference category.

The results of the two logistic regression models are displayed in Table 18. The results indicate that women were more likely to perceive that they had no knowledge about safe sex at the time of first sexual intercourse compared to men. Women were also less likely to have used a condom. Marital status was not significantly related to knowledge about sex (Model 1), although it was highly significantly related to condom use at the time of first sex. The

odds of someone using a condom when they first had sex were 16 times higher if they had sex while they were not married, compared to if their first sexual experiences was with their spouse .

The age of the respondent at the time of their first sexual experience was negatively related to knowledge about safe sex, and positively related to condom use. Education was strongly positively related to knowledge, but was not highly significant in predicting condom use. The effect of education on levels of knowledge about safe sex could be through both direct and indirect effects of education.

While some limited sexuality education is taught in Indonesian school as early as the primary level, it is only in the higher level or secondary schools that students learn more about family planning, contraceptive methods and HIV and other sexually transmitted infections (National AIDS Commission Republic of Indonesia 2009). Individuals who did not complete higher levels of secondary education might therefore not have adequate levels of knowledge about safe sex. Indirectly, education may also have an effect on levels of knowledge about safe sex over and above the material that is learnt through the school curriculum. Higher educated individuals may consume more media sources for example, and may be therefore be exposed to information about sexual health through newspapers, radios, leaflets etc.

Table 18. Logistic regression of having no knowledge about safe sex (Model 1) and of using a condom (Model 2) during the first sexual intercourse (Odds ratios), Greater Jakarta, 2010

	No knowledge	Condom use
	Model 1	Model 2
Sex		
Male (ref)	--	--
Female	1.34**	0.68*
Married at first sex		
Yes (ref)	--	--
No	1.14	16.36***
Age at first sex		
<18 (ref)	--	--
18-21	0.53***	1.92*
22+	0.39***	2.04*
Age group		
20-24	0.70*	1.60*
25-29 (ref)	--	--
30-35	0.98	0.84
Highest education		
Primary school or less	1.39**	0.54
Junior high school (ref)	--	--
Senior high school	0.35***	1.22
Certificate	0.15***	1.62
Bachelors or higher	0.17***	2.05*
Religion		
Muslim (ref)	--	--
Protestant	1.14	1.05
Catholic	1.27	1.36
Other	1.11	2.73
Number of observations	1,771	1,771
Prob>chi2	0.000	0.000

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Current use of condoms

Current use of condoms was asked among respondents who indicated that they had had sex at least once during the past month. Based on the frequency they had has sex, and the frequency that condoms had been used, a variable was derived indicating whether condoms were used every time, at least half the time, more than half the time or never.

As with the previous table, the level of condom use was very low overall. Again, males were more likely to be using condoms, as were those who were not currently married and those with higher education.

Table 19. Frequency of using condoms during intercourse in the last month (among those who had sex in the last month), Greater Jakarta, 2010

	Every time	>= Half the time	< Half the time	Never	Total	
	%	%	%		%	N
Sex*						
Males	8	5	2	85	100	*433*
Females	4	3	2	91	100	*959*
Married*						
Yes	4	3	2	91	100	*1,3*
No	37	12	9	42	100	*57*
Age group						
20-24	8	5	3	84	100	*199*
25-29	4	4	1	90	100	*492*
30-35	6	3	2	90	100	*701*
Highest education*						
Primary or less	2	2	0	95	100	*258*
Junior high school	3	4	1	92	100	*299*
Senior high school	5	3	3	89	100	*616*
Certificate	12	3	2	83	100	*93*
Bachelors+	13	9	2	76	100	*124*
Total	5	4	2	89	100	*1,390*

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Multiple sexual partners, and other sexual activities

Among those who had ever had sex, nearly 90 per cent reported that they had only had sexual intercourse with one person including their current partner or spouse.

Table 20. Reports of lifetime number of sexual partners, including current partner or spouse, Greater Jakarta, 2010

	N	%
One person	1,528	89.7
2-5 people	75	4.4
6-9 people	14	0.8
10-19 people	13	0.8
Not answered	73	4.3
Total	1,703	100.0

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

This study is the first representative sample survey in Indonesia that asked about very sensitive sexual behaviour including masturbation (self or with partner) and oral-genital sex. The results revealed that masturbation started at quite a young age (16.9%), though males are 7 times more likely to masturbate compared to females. Interestingly masturbating with a partner is quite common among both female and male as one third of both female (27.3) and male (27.8) respondents have experienced mutual masturbation. More than twenty per cent of males compared to 15.6 per cent of females have ever experienced having oral sex. These results show that the approach the survey used by placing the questionnaire on sexuality behaviours and other risky behaviour in an envelope in order to secure confidentiality was effective. Other opportunistic survey conducted by Purdy in 2000 among 474 young people aged 15-24 years old in Jakarta, Surabaya, Medan and Bandung, revealed very similar results as our findings where as 22 per cent of males and 16 per cent of females have experienced oral sex behaviour. In his study, age group was not a factor as 19 percent of those aged 15-19 and 19 per cent aged 20-24 had had oral sex (Purdy, 2006).

Table 21. Percentage of respondents who reported experience in different sexual activities, Greater Jakarta, 2010

	Male	Female	Total	Average age
	%	%	%	
Self-masturbation	48.5	6.9	24.1	16.9
Masturbation with a partner	27.8	27.3	27.5	21.9
Oral sex	21.2	15.6	17.9	22.3
Anal sex	1.1	1.4	1.3	-
Group sex	0.6	0.1	0.3	-
Total N	1,228	1,730	2,958	

Source: The 2010 Greater Jakarta Transition to Adulthood Survey

Conclusion

Though this survey was conducted in Greater Jakarta, where access to information and education would be greater compared to other provinces and remote regions through out Indonesia, 15 per cent of the sample had never heard of HIV/AIDS. As expected education level was a very important determinant. Whereas one third (33%) of those with primary school or less had never heard of HIV/AIDS, the equivalent figure was only 7 per cent for those with a university degree. Level of knowledge about STIs was considerably lower than for HIV/AIDS with around 60 per cent of respondents indicating that they had never heard of STIs. **M**ales were more likely to have heard of STIs, as were those with higher education.

Among those who had heard of HIV/AIDs, there was varying levels of knowledge about the methods of transmission. Overall a high percentage know correctly that HIV can be transmitted from sexual intercourse without a condom, from sharing needles and from blood transfusions (~79-84%). However for activities such as kissing, sharing food utensils, from mosquito bites etc there was some degree of confusion with a significant percentage believing that this was a way that HIV was transmitted, and also a high percentage saying that they 'did not know'. For both HIV/AIDS and STIs the most popular sources of information where the television, newspapers and peers. Thus for policy purpose television, newspapers as well as online information would be a very important venue to disseminate information on HIV/AIDS and STIs as well as safe sex practices.

Among those who had heard of HIV/AIDs, 17 per cent indicated that they knew someone with HIV. Only 3 per cent or 76 individuals had ever been tested for HIV, and of those 6 people indicated that they were HIV positive. Among those who had heard of STIs, 18 per cent knew someone with an STI. Around 4 per cent or 42 individuals had ever been tested for STIs, and of those 4 people indicated that they had positive results.

In regards to sexual behaviour, 11 per cent of never married respondents and 98 per cent of ever-married respondents had had sex. Among the ever-married, around 10 per cent were not married during the time of their first sexual encounter. In relations to premarital sexual intercourse there is a significant difference between males and females, only 5 per cent of never married females had had sex, compared to 16 per cent of males. Other studies found similar results (Utomo I., 1998; Situmorang, 2001; Purdy, 2006; Diarsvitri, Utomo and Neeman, Forthcoming).

The 2010 Greater Jakarta Transition to Adulthood Survey used two types of questionnaires. The second asked very sensitive questions regarding sexual behaviour and practices as well as sexual orientation and life time sexual partners. The way that the second questionnaire was self administered where confidentiality of the respondents is strongly guarded revealed that very sensitive question on sexuality and STI/HIV status can be responded by respondents. This would be a good strategy for future studies as reporting on premarital sex behaviour of the 2007 Indonesian Demographic Health Survey was very low and underreported as the research was done by face to face interview and respondents might be reluctant to give honest answers.

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