Safe sex behaviours among Indonesian heterosexual young adults

Submitted by

Simon

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Melbourne School of Psychological Sciences
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Abstract

Indonesia’s HIV epidemic is one of the fastest growing in Asia. The major mode of transmission for recent AIDS cases is through heterosexual contact. While research into safe sex strategies, in particular condom use, is widely available in Western and African countries, this kind of research has rarely been conducted in the Indonesian context, especially with young adults participants. The purpose of this research was to understand safe sex behaviour among heterosexual Indonesian young adults. In doing so, this research is divided into four main areas of study. The first two studies focused on the cultural and psychosocial context of sexual relationships and safe sex behaviour while the latter two studies, guided by the Theory of Planned Behaviour (TPB), focused on identifying determinants of intention to use a condom and ultimately actual condom use.

Participants in all studies were university students, aged 18-24 years, from different universities in Surabaya. The universities covered a cross-section of socioeconomic status participants (e.g., variation in wealth distribution, parental education and occupation) and were mainly attended by students from either Javanese or Chinese Indonesian backgrounds. Contextual factors such as type of partner, communication with partner, level of sexual arousal, alcohol and drug use, and condom availability were examined in relation to intention to use a condom and condom use behaviours. Study 1 used a focus group design, Studies 2 and 3 used cross-sectional questionnaire methodology, and Study 4 used a prospective design.

Sexual activity before marriage was widely, though by no means universally, regarded as quite common. While not specifically endorsing sex before marriage for themselves, many young participants believed their peers were sexually active. This research found that 32% of participants indicated they had had a sexual experience of some kind, ranging from non-penetrative and oral sex, to anal and vaginal sex. Significant predictors of not being sexually active were being female, not working, lower SES, religious involvement, lower perception of peer’s permissive sexual behaviour, and higher perception of family happiness. Overall, knowledge about HIV transmission was poor. Among sexually active participants, perceived risk of STIs and HIV/AIDS was low. However, risk of pregnancy was perceived to be high.

This study provides support for the utility of an extended version of the TPB in predicting intention to use a condom. General intention (Prior Intention) to use a condom was relatively high among sexually inactive participants but lower in sexually active participants. Immediate intention (Intention in Action) before a specific sexual encounter was predicted by communication with partner about condoms and ever having had STI symptoms. The models examining predictors of actual condom use highlighted the importance of having positive attitudes about condom use, communication with partner about condoms and most importantly condom availability. Finally, implications for public health intervention are discussed.

Keywords: Safe sex behaviour, Indonesian young adults, condom use, Theory of Planned Behaviour
Statement of Authorship & Ethics Approval

Except where reference is made in the text of the thesis, this thesis contains no material published elsewhere or extracted in whole or in part from a thesis submitted for the award of any other degree or diploma.

Another that has also contributed to the work presented is Professor Susan Paxton as research supervisor. No other person’s work has been used without due acknowledgement in the main text of the thesis.

This thesis has not been submitted for the award of any degree or diploma in any other tertiary institution.

All research procedures reported in the thesis were approved by the University of Melbourne Ethics Committee.

Simon (Simon)
14 March 2014
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The woods are lovely, dark and deep.

But I have promises to keep, and miles to go before I sleep,

and miles to go before I sleep...

(Robert Frost, Stopping By Woods on a Snowy Evening)
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Chapter 1
Introduction

Human immunodeficiency virus (HIV) and Sexually Transmitted Infection (STI) rates have become major health problems in Indonesia. While other countries in the last decade have seen a decrease in prevalence of HIV infections, including some Asian countries, Indonesia is still experiencing the contrary trend, with the frequency of new cases still growing. In 2007, it was reported that the number of new HIV cases in that year was 6,048, but in 2008, the number of new cases rose sharply with 10,362 new HIV cases reported, followed by a decrease in 2009 with 9,793 new cases reported, but followed in 2010 with a sharp increase to 21,591 new HIV cases (Directorate General of Communicable Disease Control and Environmental Health, 2013). The most recent available official data reported 20,413 new HIV cases and 2,763 new AIDS cases just in the period from 1 January to 30 September 2013 (Directorate General of Communicable Disease Control and Environmental Health, 2013). The Joint United Nations Programme on HIV/AIDS or UNAIDS (2010) reported that the number of Indonesians living with HIV is actually much higher, around 310,000 people with the range of estimates being between 200,000 – 460,000. Three years later, the UNAIDS reported a number twice the size: around 610,000 people living with HIV in Indonesia, with the range of estimates being between 390,000 – 940,000 (UNAIDS, 2013a). In the official UNAIDS’ report to commemorate 2012 World AIDS Day, Indonesia was mentioned – along with Bangladesh, Philippines and Sri Lanka — as one of the countries in Asia in which the epidemic had significantly increased (UNAIDS, 2012).

Worldwide, there are two main modes of HIV transmission: through unprotected sex (paid or unpaid, male-female or male-male) and sharing unclean
paraphernalia when injecting drugs. Other means of transmission such as mother to
child transmission and blood transfusion exist but is low compared with the other two
modes (Chamberlain, 2010). In Indonesia, cumulatively, the main mode of
transmission is through heterosexual contact (Directorate General of Communicable
Disease Control and Environmental Health, 2013). In past years, there has also been
a great increase in transmission through needle sharing amongst intravenous drug
users (IDUs), which in 2005 had reached 50% of the HIV prevalence (Morineau et al.,
2012). The fact that new HIV infections are very common among IDUs can be
attributed to poor approaches to public health in Indonesia, as is the case in many
Asian countries (Cook, 2010; Mathers et al., 2010). In Indonesia, a harm reduction
framework such as the provision of clean syringes and methadone replacement
therapy, has recently been adopted to overcome HIV infection through needle sharing.
For example, Indonesia revised its national AIDS strategy in 2007 to include harm
reduction, and the country’s supreme judicial court issued a ruling that officially
prioritized drug rehabilitation over incarceration of drug users (UNAIDS & WHO
2009). As would be expected as a result of harm reduction strategies, Indonesia is
starting to see a positive impact with a reduction in the incidence of HIV infections

Although in general intravenous drug use can spread HIV infection faster than
any other mode of transmission (Morineau et al., 2012), it is important to note that the
number of people engaged in intravenous drug use is much lower than the number of
people who are sexually active, and thus sexual contact is still the main mode of HIV
transmission in Indonesia (Directorate General of Communicable Disease Control and
AIDS Epidemic Update written a few years after the IDUs driven epidemic in
Indonesia, it was clearly stated that in “Indonesia an epidemic that was originally confined to injecting drug users is now becoming more generalized through increased sexual transmission” (UNAIDS & WHO 2009, p.42). The Update also mentioned that increasingly, male members of populations at higher risk are exposing their female sexual partners to HIV, resulting in a steady rise in HIV prevalence among low-risk heterosexual women (Lazuardi et al., 2012). New HIV infections among IDUs are projected to decrease from 40% in 2008 to 28% in 2014, whilst infections due to sexual transmission are projected to rise from 43% to 58% over the same period (National AIDS Commission, 2012; USAID, 2010). Indeed, official statistical data show that, cumulatively since 1 April 1987 until 30 June 2013, 27,782 cases were caused by heterosexual transmission, followed by intravenous drug use with 7,962 cases (Directorate General of Communicable Disease Control and Environmental Health, 2013). An update on HIV statistics by UNAIDS and the United Nations General Assembly Special Session (UNGASS) country report has confirmed that Indonesia’s epidemic is one of the fastest growing in Asia – and continuing to this day — with heterosexual contact being the main mode of transmission (50.3%), followed by intravenous drug use (40.2%) and homosexual contact (3.3%) (UNAIDS, 2012; UNAIDS & WHO, 2009; USAID, 2010).

Controlling STIs is also important for prevention of HIV as STIs fuel the HIV epidemic by increasing the risk of HIV acquisition (Tanudyaya et al., 2010). There is substantial biological evidence demonstrating that the presence of other STIs increases the likelihood of both transmitting and acquiring HIV through increased susceptibility and increased infectiousness (Centers for Disease Control and Prevention, 2010a). However, obtaining population-based data on STI prevalence and incidence in Indonesia is difficult, although a small number of reports are
available. It is clear that these reports cannot give a precise picture of STI prevalence for the country as a whole, as evident in the focus of the past National AIDS Strategy that emphasized the importance of conducting proper HIV/AIDS and STI surveillance (Saifuddin, 1995; USAID, 2010). The strategy (USAID, 2007) recognises that:

(To conduct) proper HIV, AIDS, and STI surveillance, good laboratories are needed in sufficient number in each region, supported by a network of diagnostic laboratories and referral laboratories. This calls for a standardized surveillance system with national coordination and direction from the Ministry of Health. (p. 13)

Implementation of HIV surveillance in Indonesia started with the implementation of HIV sero-surveillance in 1988 and behavioural surveillance in 1996. HIV surveillance systems were being modified by the adoption of the second-generation HIV surveillance guide issued by the WHO in 2002. In 2007, Indonesia for the first time conducted a survey taking biological and behavioural data simultaneously, known as the Integrated Biological and Behavioural Surveillance (IBBS) (Kandun et al., 2012).

Most data on STIs have focused on sex workers and individuals who visit family planning or maternal health clinics, despite micro studies and sporadic reports in local medical journals and newspapers indicating that many adolescents are infected with STIs (Situmorang, 2003a; Valentino, 2011). Globally, it is estimated that more than 340 million new cases of curable STIs, such as *Treponema pallidum* (syphilis), *Neisseria gonorrhoeae*, *Chlamydia trachomatis* and *Trichomonas vaginalis*, occur every year throughout the world in men and women aged 15–49 years, with the largest proportion in the region of South and South-East Asia, including Indonesia (World Health Organization, 2007). The IBBS – specifically
looking at female sex workers in Indonesia — found that the average prevalence of chlamydia, gonorrhoea and active syphilis was 35.6%, 31.8% and 7.3% respectively, in which the researchers noted that the prevalence had increased steadily over the years (Magnani et al., 2010).

In light of these statistics, it is clearly essential that strategies to prevent HIV and STIs through sexual contact are developed. The fact that the number of new HIV/STI cases is rising rapidly is evidence that current prevention strategies are insufficient. While a focus on a short-term strategy is required immediately (e.g., a focus on IDUs and sex workers), a switch in focus to a long-term strategy is also necessary. In particular, a focus on the general population is required, especially on adolescents and young adults who are at risk since most people who engage in risky sexual behaviours fall in this age category (Directorate General of Communicable Disease Control and Environmental Health, 2011, 2013; East, Jackson, O'Brien, & Peters, 2007; Ferraris, 2012; Jemmott, 2012).

In Indonesia, to date, most safe sex prevention work has been directed towards abstinence. While abstinence is clearly an effective method of prevention of STI/HIV transmission, it is undoubtedly unrealistic to rely solely on abstinence as a safe sex strategy, especially since Indonesian young adults are now gradually delaying their marriage (Jones & Gubhaju, 2008; Naafs, 2010; Rowe, 2009). On the other hand, there is very little research available to guide the development of more effective strategies in Indonesia, especially with young people being the centre of consideration. Although research into safe sex strategies — specifically condom use — is widely available in relation to Western and African countries, research from these countries suggest that findings may not be applicable to Asian countries due to differences in cultural and contextual factors (Cha, 2005; Jansen, Hoeken, Ehlers, &
van der Slik, 2008). It is, therefore, vital to explore the sexual behaviour of Indonesian young adults, especially in relation to safe sex practices, in order to provide culturally relevant research to inform the development of prevention strategies. This is the focus of the research presented in this thesis.

The research presented in this thesis explores four different areas related to safe sex behaviour among Indonesian young adults. The first study aimed to gain a greater understanding of sexuality and safe sex behaviour from the viewpoint of young Indonesians. The main aim of this research was, through a series of focus groups, to explore male and female, Javanese and Chinese Indonesian, perceptions of attitudes and behaviours regarding sexual relationships and particularly condom use, in unmarried young adults in Indonesia. This information is needed to inform effective prevention interventions for STIs and HIV/AIDS.

The second study explored psychosocial factors associated with sexual practices and safe sex. Specifically, relationships between safe sex attitudes and practices and psychosocial factors, including such factors as social economic status, gender, education level of parents, religiosity, peer attitudes, family relationships and sex education were examined in order to achieve better understanding of young adult sexual behaviour in Indonesia. Basic knowledge such as this is essential for policy development regarding young adult sexual health.

The third study investigated predictors of intention to use a condom, guided by the Theory of Planned Behaviour (TPB) (Ajzen, 1985). As a social cognition model, TPB has been widely used in understanding health behaviour, including condom use (Abraham, Sheeran, & Henderson, 2011). Despite debate, research over the years does indicate that the TPB has better predictive and practical utility compared to other models (Groeneboom, van Weert, & van den Putte, 2009; Presseau, Francis,
The aim of this third study was to gain a deeper understanding of condom use behaviour in Indonesia, rather than specifically examining the utility of TPB as a model.

The fourth study examined the relationship between intention to use a condom and actual condom use. In this study, some contextual factors that have been identified in previous research using the TPB as influencing actual condom use were explored. Earlier research has indicated that TPB variables sometimes cannot fully capture behavioural phenomena and thus additional variables may be needed to predict actual behaviour. This is particularly true in a study of safe sex behaviour in which the context is complex. Thus, the aim of the fourth study was to identify a model that clarifies the relationship between intention to use a condom and its actual use.

In overview, Chapter 2 provides a background to the prevalence of HIV/AIDS and STIs in Indonesia. In Chapter 3, the importance of the psychosocial context of safe sex behaviours will be described. In Chapter 4, a review of the theoretical frameworks used to examine safe sex behaviour will be provided. Chapter 5 presents an overview of studies to be described and the hypotheses to be examined. Chapter 6 will report the first study of this research on social context of sex and safe sex among Indonesian heterosexual university students. Chapter 7 will describe psychosocial factors associated with sexual practices and safe sex in Indonesian heterosexual university students. Chapter 8 and Chapter 9 will describe the third and fourth study of this research on predicting intention and actual condom use behaviour guided by TPB in the same sample. Finally, Chapter 10 summarises findings and considers the public health implications of this research. It also considers methodological limitations of the research and future research directions.
Chapter 2
HIV/AIDS and STIs in Indonesia

Prevalence of HIV/AIDS and STIs in Indonesia

Understanding attitudes towards sexual risk behaviour in Indonesia is becoming increasingly important. HIV and AIDS have become international health problems over the last three-decades. Globally, in 2012, Sub-Saharan Africa was suffering the highest incidence of HIV, accounting for 70% of the global total, while in Asia the epidemic was increasing significantly, with an estimated of 270,000 newly infected in South and South-East Asia (UNAIDS, 2013a). However, a recent update on the state of the AIDS epidemic in Sub-Saharan Africa reported a 34% decline in the HIV annual incidence rate (UNAIDS, 2013a). Available reports on Asia also showed a decline in new HIV infections in some Asian countries and regionally infection rates appeared to have stabilized. It is worth noting, however, that while the proportion of individuals with HIV in Asia is relatively low, the absolute numbers of people infected is high, with a current estimate of 4.9 million (ranging from 4.5 million to 5.5 million) people living with HIV, largely in India, China and Indonesia (UNAIDS, 2010, 2013a).

Although HIV infection rates have decreased in some countries (UNAIDS, 2007, 2010, 2013a), unfortunately this is not the case in Indonesia where they are still growing (Directorate General of Communicable Disease Control and Environmental Health, 2011, 2013; UNAIDS, 2012, 2013b). In fact, according to the National AIDS Commission (NAC) of the Republic of Indonesia in their 2008 Country Report on the Follow-up to the Declaration of Commitment on HIV AIDS and in subsequent reports, Indonesia’s new HIV infection rate is one of the fastest growing in Asia (National AIDS Commission, 2009; UNAIDS, 2012, 2013b; USAID, 2010).
The World Health Organisation (WHO) confirmed the relatively low prevalence reported by Indonesian authorities, but warned of the possibility of misdiagnosis and under-reporting of HIV/AIDS cases. Indeed, 52,000 people were estimated to be living with HIV/AIDS in Indonesia at the end of 1999 when at that time the official estimate from Indonesian authorities was less than a thousand cases (UNAIDS, 2000). In June 2001, at the UNGASS (United Nations General Assembly Special Session) on HIV/AIDS, the Indonesia Minister of Health and Social Welfare admitted for the first time that there were approximately 120,000 Indonesians living with HIV/AIDS (National AIDS Commission, 2001). In 2008, it was estimated that 193,000 people were living with HIV/AIDS (National AIDS Commission, 2009) and, in 2009, the UNAIDS estimate was 310,000 (UNAIDS, 2010). The UNAIDS estimate in 2013 was 610,000 while the official report by the Indonesian authorities as of 30 June 2013 was only 118,792 (Directorate General of Communicable Disease Control and Environmental Health, 2013; UNAIDS, 2013a). Despite the likely discrepancy between reported and actual cases, the official report by Indonesian authorities clearly shows that there is a significant increase in new HIV/AIDS cases each year (Directorate General of Communicable Disease Control and Environmental Health, 2013).

Statistical data on STIs more generally in Indonesia are also somewhat unreliable, being mostly on high-risk groups, and based on out-dated and potentially unreliable information. In the case of HIV surveillance in Indonesia, high-risk occupational groups refer to occupational groups of men known or suspected to be frequent clients of female sex workers (Lingga, 2009). Such men represent an important “bridge” population between female sex workers, one of the population sub-groups in Indonesia in which the HIV/AIDS epidemic is currently concentrated,
and the general population (Mustikawati et al., 2009). According to Lingga (2009), transportation workers (e.g., dock workers, motorbike taxi drivers, seafarers and truck drivers) are particularly vulnerable with high numbers being clients of sex workers due to high levels of mobility, occupational stress and having workplaces located close to recreational areas.

One Indonesian study of female sex workers was conducted in Surabaya, which is known to have a large and diverse sex industry (Gorman, 2008; Hull, Sulistyaningsih, & Jones, 1999). This Behavioural Surveillance Survey reported that in Surabaya, 27.6% of direct\(^1\) female sex worker respondents, 12.8% of indirect\(^2\) female sex worker respondents, and 14.6% of respondents who were clients of female sex workers, were infected by STIs in the last 12 months (Ahnaf, Riono, & Anwar, 2005). A comprehensive biological and behavioural surveillance study (Surveilans Terpadu Biologis Perilaku) conducted with female sex worker groups in eight provinces in Indonesia found that around 36% of direct female sex workers in East Java (of which Surabaya is the capital city) and around 60% of direct female sex workers in Jakarta were infected by at least one of the STIs, chlamydia, gonorrhoea, or syphilis (Depkes & BPS, 2008). Lower infection prevalence was found in indirect female sex workers, with around 29% in East Java and 39% in Jakarta. Chlamydia was the most prevalent in Indonesia and its prevalence together with gonorrhoea were the highest in Asia (Depkes & BPS, 2008).

A more recent cross-sectional study that involved 2,500 female sex workers in nine provinces in Indonesia reported a high prevalence of chlamydial infection (43.5%), gonorrhoea (28.6%), trichomoniasis (15.1%), and syphilis (8.7%).

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\(^1\) Direct means those female sex workers who work in lokalisasi – a red light district with many brothels.

\(^2\) Indirect is “disguised prostitution”, female sex workers who work independently, such as in massage parlours and karaoke bars.
prevalence of any STI was 64% and inconsistent condom use was very common (73.2%) (Tanudyaya et al., 2010). A research study among dock workers, mototaxi drivers, seafarers and truck drivers found that approximately 13% of men reported that they had had STI symptoms in the previous year (Mustikawati et al., 2009). Of these, less than half (46%) received professional medical treatment, some either self-treated or sought traditional treatment (37%), and 17% of cases went untreated (Mustikawati et al., 2009). The last published Indonesia Reproductive Health Profile (Ministry of Health & World Health Organization, 2003) reported that each year in the general population, around 5,000 to 10,000 cases of syphilis and between 20-30,000 cases of gonorrhoea were reported by community health centres and hospitals throughout Indonesia. In the same survey, it was found that 3% of female and male participants had been diagnosed with an STI or had had STI symptoms in the last year. Although data are limited, these studies do suggest STIs other than HIV/AIDS are quite prevalent in Indonesia. As a comparison, in a large and comprehensive sexuality study in Australia conducted in the general population by the Australian Research Centre in Sex, Health and Society in 2001-2002, it was found that only 2% of men and 2.2% of women participants had been diagnosed with STI in the last year (Grulich, de Visser, Smith, Risse, & Richters, 2003), although recent figures from another report have shown an increase. For example, in 2012 alone there were 82,707 newly diagnosed cases of chlamydia and an increased rate of gonorrhea to 84.3 and 36.1 among males and females, respectively (The Kirby Institute, 2013).
Transmission of HIV and STIs

As indicated above, the main mode of HIV transmission in Indonesia is through heterosexual contact. In 2009, the Indonesian NAC envisaged that “in the near future HIV is predicted to be predominantly spread through sexual modes of infection” (National AIDS Commission, 2008, p. 10). This prediction became reality in 2009 when the main mode of transmission was identified as through heterosexual contact (Directorate General of Communicable Disease Control and Environmental Health, 2010).

The report of the United Nations Commission on AIDS in Asia clearly states that although the modes of HIV transmission vary considerably from country to country, they share the same factors: through heterosexual (mainly commercial sex) and homosexual unprotected sex and/or intravenous drug use (Commission on AIDS in Asia, 2008). When these factors appear in combination, the likelihood of transmission rises. This is an issue in Indonesia as demonstrated by one study conducted in Surabaya, which showed that 95.2% of IDUs reported having multiple sex partners in the last 12 months, 51.6% of them were with female sex workers and only 12.9% of participants reported having consistently used condoms in sexual intercourse in the last 12 months (Ahnaf et al., 2005). When infected drug injectors are also involved in the commercial sex trade (as buyers or sellers), HIV epidemics can occur very quickly (Commission on AIDS in Asia, 2008). Furthermore, spread of HIV into the general population through extra-marital sex, –either with commercial sex workers or sexual affairs without condoms, –is very likely to occur, since these behaviours endanger wives and girlfriends and potentially create a multiplier effect.

In Asia in general and specifically in Indonesia, men who buy sex outnumber drug injectors and men who have sex with men, by a large margin (Lingga, 2009).
On average, in Asia, there are about 10 male clients for every sex worker and it is estimated that in Indonesia, more than three million men buy sex each month (Commission on AIDS in Asia, 2008). Unfortunately, according to a UNICEF report, around 30% of the women in prostitution in Indonesia are below the age of 18, with 40,000-70,000 Indonesian children being victims of sexual exploitation, 21,000 of them being estimated to be involved in prostitution on Java alone (UNICEF Indonesia, 2010).

However, in the general population in Indonesia, consistent with findings in least gender-equal countries and ethnic groups, there is a difference in the age of first sexual encounter between men and women, and the number of young unmarried men and women who have had sexual intercourse (L. K. Lee, Chen, Lee, & Kaur, 2006; Petersen & Hyde, 2010). The discrepancy suggests that many unmarried men may have contact with either commercial sex workers, older women who are already sexually experienced, or a same sex partner, all of whom could put young people at risk of STIs.

Furthermore, global research indicates that some unmarried female adolescents and young women become commercial sex workers3 for economic reasons (ECPAT International, 2010). In Indonesia, many of these women choose to work informally on the streets, malls, karaoke establishments or in massage parlours rather than in a lokalisasi (a red light district, in which there are many brothels), as it

3 There are three types of sex worker in Surabaya and Jakarta: Pelacur (prostitute) or usually called WTS (Wanita Tuna Susila = woman without morals), Perek (perempuan eksperimen = experimental girl) and Pecum (perempuan cuma-cuma = girl for free). WTS are those who get paid for providing sexual services and who make this job their primary source of income. Perek are adolescent girls who work on the street, shopping centre, or discotheque in which they get paid for providing sexual services, usually with older clients. Perek often give free sexual favours to a male peer if they like the man. Pecum are adolescent girls who are willing to give sexual services –often non-intercourse relationships - in exchange for gifts (such as clothes, cosmetics, dinner, movie) or sometimes cash. Pecum can be found mainly in shopping centres or discotheques. In recent years, there are two more terms used by youth in Indonesia, bisyar and bispak. Bisyar is an acronym of “bisa dibayar” (literally means “can be paid” in exchange for sexual service, similar to perek). Bispak is an acronym of “bisa dipakai” (literally means “can be used” for sexual service, similar to pecum).
is easier and less restrictive. It is likely that these women especially do not have regular access to sexual health checkups. Checkups are compulsory on a regular basis for those working in the *lokalisasi*, or at least health facilities are available nearby the *lokalisasi* (Pasaribu, 2011; Tea, 2012). In addition, very frequently a commercial sex worker will have at least one steady boyfriend who is also involved in other non-monogamous relationships (Crisovan, 2006). This combination of circumstances is likely to facilitate the spread of STIs among young adults.

**Sexual Activity, STIs and Condom Use in Adolescents and Young Adults**

According to a report in the United States, sexually active adolescents and young adults are at higher risk of acquiring STIs than are older adults for behavioural, biological, social and cultural reasons (Centers for Disease Control and Prevention, 2010b). During adolescence sexual ideation and activity typically increase and may be characterized by curiosity and risk-taking (Crockett, Raffaelli, & Moilanen, 2008; Råssjö, Mirembe, & Darj, 2006). Factors that place adolescents at risk for STIs include an early age of sexual debut, frequent and concurrent partners, inconsistent or incorrect use of condoms, and experimentation with alcohol and other substances that may increase frequency of sex without a condom and consequently exposure to STIs (Johnson, Scott-Sheldon, Huedo-Medina, & Carey, 2011).

In the United States alone, it has been estimated that about 3 million female adolescents (ages 14–19) have at least one STI (Forhan et al., 2009). Around the world approximately half of new HIV infections occur in young adults under the age of 25 years (D’Angelo, Samples, Rogers, Peralta, & Friedman, 2006; DiClemente et al., 2008; DiClemente, Salazar, & Crosby, 2007). HIV infection in Indonesia is consistent with this world pattern, with Indonesian young adults – who, according to the 2010 National Census (Badan Pusat Statistik, 2010) number about 41 million in
the age group of 15 to 24 years — being the most vulnerable group (Directorate General of Communicable Disease Control and Environmental Health, 2011, 2013). According to available official data, the largest age group who suffer from AIDS in Indonesia is between 20 and 29 years and with the knowledge that it takes years for HIV to progress from the infection stage to AIDS, we can conclude that they are likely to have been infected in their adolescence or early adulthood (Ferraris, 2012).

Unfortunately, the recognition of the growing incidence of STIs is not reflected in the development of effective prevention programmes. Short of abstinence or monogamy, it is widely recognised that consistent condom use is a valuable preventive measure (UNAIDS, 2010). However, basic knowledge of the benefits of condom use among Indonesian young adults — especially among women — appears to be limited. According to the last Indonesian Young Adult Reproductive Health Survey that studied males and females aged 15-24 years, only 72% of males and 64% of females agreed that condom use can prevent HIV/AIDS, and only 63% of rural females and 76% of urban females believed that condom use could help them avoid pregnancy (Badan Pusat Statistik & Macro International, 2008b).

The two year 2004-2005 STD/HIV Risk Behavioural Surveillance Survey was conducted in sixteen major Indonesian cities (e.g., Jakarta, Surabaya, Denpasar) and predominantly surveyed sex workers, clients of sex workers, transgender people, gay men, and IDUs. It clearly indicated that condom use was low (Ahnaf et al., 2005). In the clients of sex workers category, (i.e., drivers, sailors and port labourers), the proportion of condom use in their last sexual encounter was only 24% for drivers, 28% for sailors and 56% for port labourers. In fact, compared to the previous Behavioural Surveillance Survey (B. Utomo et al., 1998), the proportion of condom use in their last sexual encounter had actually declined for sailors from 31% to 28%
and from 70% to 56% for port labourers. Approximately 40% of these drivers, sailors and port labourers surveyed in this surveillance survey were young adults aged 15-24 years.

The 2004-2005 STD/HIV Risk Behavioural Surveillance Survey found there was an increase in condom use in the last sexual encounter among female commercial sex workers (around 45% of whom were 15-24 years old) since the previous survey (Ahnaf et al., 2005). However, increases were relatively small, from 55% to 61% among direct female sex workers and from 53% to 57% for indirect female sex workers. Consistent condom use during commercial sex acts in the preceding week was even lower, with direct female sex workers reporting only 30% and indirect female sex workers reporting only 35% of condom use in their sexual encounters (Ahnaf et al., 2005).

Of the IDUs studied in the Behavioural Surveillance Survey, 42% of whom were aged less than 24 years old, approximately half had steady sexual partners, or spouses (Ahnaf et al., 2005). The percentage of IDUs who used a condom during their last sexual encounter was on average 25%, whilst the percentage who always used a condom during the last year was on average 8%. Besides having steady sexual partners, approximately 35% of the IDUs also had unprotected sex with commercial sex workers (Ahnaf et al., 2005). In light of the high incidence of STIs in IDUs, and the high frequency of sex without a condom, the potential for spreading STIs is clearly very high.

Although these studies suggest high levels of unsafe sex practices in high risk groups, they provide little information about attitudes towards condom use and actual condom use in unmarried young Indonesian adults. As this group is a very large one, it is essential for effective STI/HIV prevention for information about condom use in
young adults to be available. Even though there is no agreement on the exact percentage of unmarried sexually active young adults in Indonesia, Hull (in Radio Australia, 2010) has pointed out that most research shows that there is an increase in the frequency of young adults who are delaying their first marriage, and many of these young adults are now engaging in sex before marriage (Ahnaf et al., 2005; I. D. Utomo, 2003). The singulate mean age at marriage rose from 19.3 years in 1971 to 20.0 years in 1980, to 21.6 years in 1990, and to 22.5 years in 2000 (Oey-Gardiner, 2003). By 2005, the singulate mean age at marriage for Indonesian women was 23.4 years and 27.0 years for Indonesian men (United Nations, 2009). This increase in marrying age increases the likelihood of a number of partners before marriage and the likelihood of more sexual partners increases the risk of STI/HIV transmission due to the greater likelihood of exposure to infection.

The focus in this research is on unmarried adolescents and young adults aged 18-24 years. Sex within marriage is acceptable in Indonesian society, but sex outside marriage typically is not acceptable and thus safe sex is frequently not endorsed or supported under these circumstances. According to the Indonesian Marriage Law, the minimum age for entering into marriage is 16 years for a woman and 19 years for a man. However, as noted above the average age of marriage is rising in Indonesia.

Research into the sexual experience of Indonesian young adults is frequently of uncertain quality. Many of the so-called “sex behaviour surveys” have never been reported in a journal and only appeared in newspapers, which makes it difficult to examine the research procedures. For example, in 2002, there was controversy when a research study showed that 97% of young women in Yogya had lost their virginity (Lembaga Studi Cinta dan Kemanusiaan serta Pusat Pelatihan Bisnis dan Humaniora, 2002). Later, researchers admitted that they employed ‘snowball’ sampling as their
sampling method. Snowball sampling is a non-probability method for developing a research sample where existing study subjects recruit future subjects from among their acquaintances. This sampling technique is often used in hidden populations which are difficult for researchers to access (Katz, 2006). However, as participants often share attitudes and behaviours with their friends, this sampling technique tends to reduce variability in data and be unrepresentative of the population (Katz, 2006).

Another example, the head of the Indonesian National Family Planning Coordination Body was quoted in a newspaper as saying without further elaboration that of young women, 51% from Jakarta and 54% from Surabaya had engaged in sexual intercourse (Fikri, 2010).

A more rigorous survey carried out by Winarso from the Biomedical Laboratory of Airlangga University (Indo Post, 2002) found that 40% of unmarried male student participants and 7% of unmarried female student participants in Surabaya aged between 19 and 23 years had had sexual experience, although it was not clear from the research report what it meant by “sexual experience”. However, in a study of the reproductive health of youth conducted by the Indonesian Central Agency on Statistics, research found only 6.4% of males and 1.3% of females had had sexual intercourse (Badan Pusat Statistik & Macro International, 2008b). The difference in results can be attributed to the characteristics of participants. In this reproductive health research, participants were Indonesia-wide including young people from rural areas who may be more conservative (i.e., abstinent) or married at a younger age than in urban areas. Notwithstanding the variations of research findings, it is generally accepted that there are more young adults engaged in sexual relationships than previously (Statistics Indonesia, National Population and Family Planning Board, Kementerian Kesehatan, & ICF International, 2013).
The usual age of first sexual intercourse has been reported to be between 15 and 24 years and this age range is one of the United Nations General Assembly Special Session (UNGASS) indicators that needs to be reported by every country annually (Badan Pusat Statistik & Macro International, 2008a). However, in a recent study in six major provinces in Indonesia, it was found that the usual age of first sexual intercourse was 15 to 20 years. For males, the mean age was 18.21 years and the median and modal ages were 18 and 17 years respectively, while the mean, median and modal ages for females were 18.58, 18 and 17 years respectively (Tambunan, Kamil, Praptoraharjo, Erlan, & Irwanto, 2010). The earlier Indonesian-wide research, the Indonesia Demographic and Health Survey- reported that within sexually active participants, 8% of women and less than 1% of men had sexual intercourse by age 15 years, while 38% of women and 12% of men had sexual intercourse by age 18 years (Badan Pusat Statistik & Macro International, 2008a).

The extent of condom use in young adults is not well known. Although the overwhelming majority (approximately 90%) of young people aged 20-29 years think that contraceptive services should be provided to them, they continue to be difficult to access due to legal restrictions on the provision of contraception to unmarried people (Ferraris, 2012). As stipulated by the Indonesian Law No. 10/1992 on Population Development and Family Welfare, family planning services are forbidden to provide assistance to unmarried people and therefore their access to knowledge and usage of contraception including condoms is restricted. Most young adults rely on street kiosks, pharmacies or supermarkets to purchase condoms. Condoms continue to carry stigma from association with “negative” behaviours such as an erroneous belief that reproductive health services increase sexual activity, especially among young people (Ferraris, 2012).
Furthermore, the Indonesia Demographic and Health Survey showed that only 43% of ever-married women know where they can obtain condoms and only 28% said they could get male condoms if they need them (Badan Pusat Statistik & Macro International, 2008a). In the same study, it was found that only 39% of ever-married or cohabiting young women knew a source where they could get a condom. In addition, only 36% of ever-married women and 49% of currently married men knew that using condoms could reduce transmission of HIV. Moreover, only 6% of ever-married women and 13% of ever-married men used condoms (Badan Pusat Statistik & Macro International, 2008a). More recent data cited by the UNFPA representative for World Population Day 2012 in Indonesia mentioned that only 1.3% of men use condoms in Indonesia (Ferraris, 2012). In these circumstances, the extent of condom use in Indonesia, and the extent of use in unmarried young adults in particular, is generally proposed to be low.

**Conclusion**

To conclude, STI and HIV/AIDS are serious problems in Indonesia. New infections among IDUs are projected to decrease from 40% in 2008 to 28% in 2014, but infections from sexual transmission are projected to rise from 43% to 58% over the same period (National AIDS Commission, 2009; USAID, 2010). Recent official data have shown that in 2012 the number of infections through heterosexual transmission outweighed the number of infections through intravenous drug use by more than three times (Directorate General of Communicable Disease Control and Environmental Health, 2013). Many married men as well as unmarried young men use the service of sex workers with inconsistent condom use and thus creates a very large vulnerable population (Commission on AIDS in Asia, 2008; Grassly & Garnet, 2005). Although studies on psychosocial determinants of safe sex behaviour have
been conducted in other countries, there has been very little conducted in Indonesia. This kind of study is of utmost importance since direct comparison or duplication may be inappropriate as cultural conditions differ and consequently predictors of safe sex behaviours are likely to be different. It is essential to gain an accurate picture that can guide development of effective public health interventions. The research presented in this thesis was conducted to gain a deeper understanding of sexual behaviours and especially attitudes towards condom use in young Indonesian adults.
Chapter 3
The Psychosocial Context of Safe Sex
Among Heterosexual Young Indonesian Adults

Definition of “Safe Sex”

The notion of safe sex was derived in response to the HIV/AIDS epidemic (Merson, O’Malley, Serwadda, & Apisuk, 2007; Moskowitz, Ritieni, Tholandi, & Xia, 2006). According to Merson et al. (2007):

That year (1983), two publications that are now seen as having invented so-called safe sex were issued: the pamphlet *Play Fair!*, produced by the activist group Sisters of Perpetual Indulgence, and *How to Have Sex in an Epidemic: One Approach*, which advocated condom use and self-empowerment and laid the foundation for a generation of prevention approaches to follow. (p. 11)

The booklet, *How to Have Sex in an Epidemic: One Approach*, was written by Berkowitz, Callen, and Dworkin (1983) in response to the AIDS crisis among gay men at a time when the causes of AIDS were unknown. The booklet is now widely recognized as the first published recommendation to use condoms to reduce the risk of transmission of HIV (Berkowitz, 2003; G. Goldstein, 2009). In 1985, when AIDS was still attributed to homosexual practice, the Coalition for Sexual Responsibility in the United States drafted safe sex guidelines to promote the distribution and use of condoms “to eliminate the exchange of body fluids during anal intercourse or oral sex” (Lindsey in Thirlaway & Upton, 2008). In developed countries, long before specific AIDS organisations and governments responded to the epidemic, gay communities and their networks actively promoted safe sex in the form of condom use to prevent the spread of HIV (Avert, 2010; Kippax & Race, 2003; Merson et al., 2007).
Subsequently, health promotion officials extended the notion of safe sex to heterosexual intercourse. The significance of safe sex has varied depending on the context and, in particular, the person’s or organisation’s view of sexuality. The concept has a wide range of meanings including being abstinent, limiting the type and number of sexual partners, non-penetrative sex, using dental dams and condom use as methods to prevent STI and in particular HIV transmission (Concordia University Health Services, n.d.; Waldby, Kippax, & Crawford, 1993). Considered generally, safe sex is sexual practice in which the individuals involved take precautions or deliberately attempt to reduce the risk of the transmission of STIs, including HIV (A.D.A.M. Medical Encyclopedia, 2010). The Victorian government of Australia includes the avoidance of pregnancy as part of safe sex definition: “having sexual contact while protecting yourself and your sexual partner against sexually transmissible infections and unplanned pregnancy. Sexual contact that doesn’t involve the exchange of semen, vaginal fluids or blood between partners is considered to be safe sex” (The Better Health Channel, 2014, p. 1). Some researchers have argued that there is actually no safe sex, since sexual intercourse always poses risk and therefore they propose the terminology of ‘safer sex’ rather than ‘safe sex’ (Concordia University Health Services, n.d.; Shiel & Stoppler, 2008). The term ‘safer sex’ is more common in the United States and Canada. In line with many papers in Australia, in this research the term safe sex will be used.

Specifically, safe sex in this research will refer to condom use, in particular in Study 3 and Study 4, as consistent and correct condom use has been shown to be the most realistic and effective way of preventing STIs and HIV (Mcallister, Travis, Bollinger, Rutiser, & Sundar, 2008; UNAIDS, 2004b). Abstinence and solo masturbation, as well as being monogamous – so long as both partners are sexually
faithful — are clearly the best methods for preventing exchange of body fluids thereby preventing STIs/HIV, but it has been proposed that expecting young people to consistently practice these methods is idealistic (Boesten & Poku, 2009; Fransen-Dos Santos, 2009). Jemmott, Jemmott, and Fong (2010) in their randomized controlled trial with young adolescents clearly differentiate between abstinence and condom use strategies which they called “abstinence-only intervention” and “safer sex only intervention” respectively. The UNAIDS (2010) recommended that short of abstinence or monogamy practiced by adolescents and adults, consistent condom use is a valuable measure to prevent STIs. A review by the Cochrane Collaboration indicated that consistent use of condoms results in 80% reduction in HIV incidence (Weller & Davis, 2002). Male circumcision has been shown to reduce risk of HIV infection and, as in Indonesia the majority of people are Muslim for whom it is obligatory for males to be circumcised, this is likely to reduce STI infection. However, condom use has been demonstrated to be more effective and efficient than circumcision and thereby a safer sex practice (Mcallister et al., 2008; van Howe & Storms, 2011). In conclusion, in this research safe sex has been defined as consistent condom use.

**Cultural and Social Context of Safe Sex**

Sexual behaviour never occurs in a vacuum. Initially in research into safe sex practices, there was an emphasis on examining individual factors within a medical discourse (Easton, O'Sullivan, & Parker, 2002; Jana, Basu, Rotheram-Borus, & Newman, 2004). At that time, in the late 1980s and early 1990s, researchers who had been using methods from classical and operant conditioning to develop smoking-cessation and other lifestyle programmes, adapted these methods for stopping HIV-associated risk behaviours (Kippax, Connell, Dowsett, & Crawford, 1993; Pequegnat
& Stover, 2009). However, there was recognition that prevention needed to be implemented at different levels as the transmission of HIV was not solely related to individual factors as emphasised in psycho-social research. For instance, Visser and Smith (1999, 2001a) in their research on the predictors of heterosexual condom use found that characteristics of the situation, such as having an agreement to use a condom and use of other forms of contraception, were more important than characteristics of the individual.

In the early 1990s, Kashima, Gallois & McCamish (1993) argued that sexual behaviour and the practice of safe sex are actually not private but rather social behaviours, a notion that can be traced back to the work of Gagnon and Simon (1973). Gagnon and Simon described a theory they called sexual scripting theory in their book *Sexual Conduct* which has been considered a landmark book in the sociology of sexuality (Plummer, 2009), and one of the most frequently cited theoretical models in post-psychoanalytic sexual science (Bancroft, 2009). Sexual scripting theory clearly locates the origins of sexual meanings and desire in the social context (Bancroft, 2009). Although thinking and treating sexuality as a social phenomenon emerged in the 1960s, it was Gagnon and Simon who developed a full theory of the social construction of sexuality, and spoke in interactionist terms, for the first time and their model became the dominant paradigm of social scientific inquiries into human sexuality (Bancroft, 2009; Jackson & Scott, 2010; Kimmel, 2007). Sexual scripting theory is derived from three major intellectual traditions: symbolic interactionism, and the works of Kenneth Burke and Sigmund Freud (Simon & Gagnon as cited in Bancroft, 2009). Gagnon and Simon challenge all forms of natural or biological determinism, arguing that human sexual conduct is a social product (Jackson & Scott, 2010). Contrary to the commonsense assumption that sexuality is the most natural of
human tendency, they see it as representing ‘humanity at its most social’ (Jackson & Scott, 2010; O’Byrne & Watts, 2010). Within this theory, sexuality is seen as a learned behaviour that is embedded in a complex set of social scripts which are specific to particular socio-political cultures and histories. According to Simon and Gagnon:

Scripts are a metaphor for conceptualizing the production of behaviour within social life. Most of social life most of the time must operate under the guidance of an operating syntax, much as language is a precondition for speech. For behaviour to occur, something resembling scripting must occur on three distinct levels: cultural scenarios, interpersonal scripts, and intrapsychic scripts. (W. Simon & Gagnon, 1984, p. 53).

Cultural scenarios are the instructional guides that exist at the level of collective life or collective meanings. Simon and Gagnon argued that “these scenarios are rarely entirely predictive of actual behaviour, and they are generally too abstract to be applied in all circumstances. The possibility of a lack of congruence between the abstract scenario and the concrete situation must be resolved by the creation of interpersonal scripts” (W. Simon & Gagnon, 1984, p. 53). Thus, interpersonal scripting is the mechanism through which appropriate identities are made congruent with desired expectations. In other words, it is the application of specific cultural scenarios by a specific individual in a specific social context. Intrapsychic scripts, on the other hands, guide the management of desires as experienced by the individual or represent the connection between individual desires and social meanings (W. Simon & Gagnon, 1984).

In term of sexual behaviour, they argued that sex is more than just the product of instinctual drives but rather the enactment of a complex set of cultural meanings,
much like actors following sexual scripts. It is the normative cultural context that
gives sex its meaning (Kimmel, 2007). Sexual scripts can be seen as providing
guidelines for appropriate sexual behaviour and sexual encounters as sexual
behaviour and encounters are learned through culture and others in interactions
(Wikipedia, 2014). In light of this social construction approach, it is recognised that
safe sex practices are part of sexual behaviour and are influenced by cultural factors,
as well as the immediate social factors that have an impact on the particular sexual
interaction (Scott, 2007). In the most recent report on the success of HIV risk-
reduction strategies for adolescents, it is clear that in order to have an effective
HIV/STI risk-reduction intervention, the programme must be tailored to the culture of
the population targeted in the programme (Jemmott, 2012).

The way in which unsafe sex practices are affected by cultural factors is
illustrated by African examples. Although Africa has a wide range of beliefs, habits
and cultural differences there are overlapping themes and similarities between
countries. In many places, rape, especially of a virgin is mistakenly believed to be a
cure of HIV infection (Loosli, 2004). Similarly, in a number of African countries,
having sex with a virgin is mistakenly believed to be a cure of gonorrhoea in male
(Richens, 2002). In addition, sexual cleaning rituals, multi-partnership networks,
polygamy and polyandry, wife inheritance, wife exchanging, cross generational sex,
incestuous and transactional sex, and the practice of dry sex are important cultural
risk factors in many areas (Loosli, 2004; Mwageni, Sichona, Ndile, & Kirway, 2007).

In culturally diverse countries like the United States, cultural differences can
also have important implications. For example, black and Hispanic women are
affected by HIV to a greater extent than white women. African Americans and
Hispanics represent 26% of all women in the United States but they account for 82%
of AIDS cases among women. African Americans constituted 64% of women diagnosed with HIV/AIDS in 2009 (Sobo & Loustaunau, 2010). It has been proposed that in these ethnic groups there is an interaction between power, and cultural and gender sexual norms that affect the practice of safe sex whereby male condom use is not directly under a woman's control thus creating gender inequalities that may help shape this sexual risk behaviour (Sobo & Loustaunau, 2010). According to the former executive director of UNAIDS, Peter Piot (2006), since the beginning of the HIV epidemic, stigma, discrimination, and gender inequality have been the major obstacles to effective responses to HIV. Thus, power imbalance between genders has been shown to be crucial in adoption or the failure to adopt safe sex practices.

This concept of power imbalances creating the subordination of women was first articulated in 1911 by Charlotte Perkins Gilman who argued that woman was a sort of accompaniment and subordinate assistant, merely essential to the making of people (Gilman, 2010). According to Gilman, man defines woman not in relation to herself but in relation to him. Simone de Beauvoir through her groundbreaking book *The Second Sex*, first published in 1949, also expounded upon gender and power imbalances (as cited in Wingood & DiClemente, 2000). In most societies, heterosexual relationships are the norm, and within heterosexual relationships women are subordinate to men. Women are often more stigmatised than men, as are young people and homosexuals, reducing their power in sexual negotiations (Boesten & Poku, 2009).

In Indonesia, it has been proposed that women perceived inequality in gender norms between men and women as part of their being (S. A. Wulansari, 2013). Gómez and Marín (1996) in their examination of the role of sexual gender norms in the United States found that many Latino women accepted the ‘traditional view’ that
men had strong, uncontrollable sexual desires and it was the woman’s role to please the man. If a woman did not maintain her ‘sexual attractiveness’ after marriage, the man had the right to seek sexual gratification outside the home. Furthermore, many Latino women and non-Latino White women reported that their partners would be angry or possibly even violent if a suggestion to use a condom was made (Gómez & Marín, 1996). Visser and Smith (1999) have argued that:

The traditional equation of femininity with passivity and submissiveness, and masculinity with activity and potency means that it may be difficult for women to assume an active role and request condom use of a partner, and it may be difficult for men to discuss sexual behaviour because their masculinity and their right to sexual fulfillment via penetration may be challenged. (p. 275-276)

There is ample evidence that male dominance and various aspects of women’s lack of power in heterosexual relationships predict unprotected sex and risk for HIV infection all over the world (e.g., Biello, Sipsma, Ickovics, & Kershaw, 2010; Crosby et al., 2008; de Visser & Smith, 1999; Pulerwitz, Amaro, De Jong, Gortmaker, & Rudd, 2002). In the last decade, there have been attempts to understand women’s risk for HIV infection using theoretical approaches such as the four bases of gendered power (i.e., force, resource control, social obligations, and consensual ideologies) and social dominance theory (Pratto & Walker, 2004). Research suggests that the four bases of gendered power contribute to women having less power than men in heterosexual relationships, resulting in challenges to preventing HIV transmission by male partners. Social dominance theory also recognises the intersections among various group-based hierarchies, such as race and class, thereby helping to explain why
women of colour and low-income women are disproportionately affected by HIV (L. Rosenthal & Levy, 2010).

The theory of gender and power (Connell, 1987) provided a framework that may help explain condom use within romantic relationships. It asserted that power dynamics between men and women can be explained by three major structures: sexual division of power (i.e., male partner dominance within relationships), sexual division of labour (i.e., economic inequality), and structure of cathexis (i.e., gender norms). These structures exist at two different levels, institutional and societal level. According to Wingood and DiClemente (2000), the institutional mechanisms include, but are not limited to, schools, work sites/industries, families, relationships, religious institutions, the medical system, and the media, and are manifest in relationship control, unequal pay for comparable work, and discriminatory practices. At the societal level, the structures are rooted in society through notions, narrative and sociopolitical forces which result in social norms based of gender role expectations (Wingood & DiClemente, 2000).

For example, Biello et al. (2010), in their research in the United States found that young women who were economically dependent on a partner were more likely to not use a condom. Additionally, this relationship appeared to be mediated by sexual assertiveness such that economic dependence on a male partner was associated with a reduced likelihood that a young woman would ask for or demand condom use, which was consequently associated with a lower likelihood of using condoms. Furthermore, although romantic love among young people can have various meanings, it is generally characterised as having attributes such as trust, attraction, happiness and friendship (Kirkman, Rosenthal, & Smith, 1998; Seiffge-Krenke, 2003). Within the context of romantic love, sexual relations can be guided by gender
scripts, which equate sexual activity with trust, intimacy and commitment for young women, and with physical pleasure, particularly for young men (East et al., 2007). Thus, this social context can be a hindrance to safe sex because condom use may imply mistrust, and unsafe sex is often seen as a statement of one’s love (Kirkman et al., 1998). Furthermore, Kong (2002) in his study of the sexual lives of three vulnerable groups in Hong Kong (i.e., sex workers, young people and gay men) found that these three groups of people seemed to be influenced by the belief system of romantic love and governed by the logic of love/safe and lust/unsafe binaries that hinder their power of negotiation of safe sex practices. For example, sex workers were firm on using condoms with their clients but were less likely to use a condom with their boyfriends/husbands – a situation that is also observed in Indonesia (Basuki et al., 2002) — and young people (especially girls) tended to use unprotected sex as a way of showing love (Kong, 2002).

Furthermore, it has been well documented that young adults’ condom use is governed more by concerns about pregnancy than STIs and that condom use is significantly less likely if other contraception is used (de Visser, 2005; de Visser & Smith, 2001b; East et al., 2007; Kirkman et al., 1998). For instance, in the United States between 2006 and 2010, more than 86% of never-married female teens and 93% of never-married male teens had used a contraceptive method at last sex. Of this, condom use only accounted for 75% and 52% by men and women respectively (R. L. Goldstein, Upadhyay, & Raine, 2013). Although the terms safe sex and contraception are often used ambiguously and interchangeably they have different meanings. This ambiguity may be in part because of the fact that there is some overlap between contraception and safe sex, with condoms having some protective functions for both STIs and pregnancy. However, other non-barrier contraceptives which are effective
in preventing pregnancy do not protect against STIs (East et al., 2007). Furthermore, research indicates that adolescents and young adults tend to move between hormonal contraceptives and condoms (R. L. Goldstein et al., 2013; Ott, Adler, Millstein, Tschann, & Ellen, 2002). In a recent study by Goldstein et al. (2013) that used a prospective cohort method among women aged 15-24 years, it was found that women’s condom use declined over periods of time when other hormonal contraceptives were being employed. At baseline, 36% were condom users, and only 5% were dual method users (i.e., condom use and one of hormonal contraceptives: pills, patch, ring, or depot medroxyprogesterone), but after initiation of a hormonal method, condom use decreased to 27% and remained relatively unchanged thereafter (R. L. Goldstein et al., 2013). Women who assumed their main partner thought condoms were very important, regardless of perceived STI risk or participant’s own views of condoms, had a higher chance of dual method use (R. L. Goldstein et al., 2013).

Taken overall, understanding the cultural and social context is crucial to understanding safe sex practices. However, there is at present a relative dearth of information about these factors in young Indonesian adults.

**Cross-cultural Variation in Condom Use**

A condom is a barrier device most commonly used during sexual intercourse to reduce the probability of pregnancy and spreading STIs including HIV. For more than 400 years, condoms have been primarily used as a method of contraception (Page, Amory, & Bremner, 2008). After learning in the early 1980s that AIDS can be a sexually transmitted infection, the use of condoms was encouraged to prevent transmission of HIV. Despite opposition by some political, religious, and other figures, national condom promotion campaigns occurred in the United States, Europe
and in many other countries. These campaigns increased condom use significantly (Benjamin, 2012). However, condoms are still used mainly as a method to prevent pregnancy. According to a study of 27 Sub-Saharan countries, condom use for pregnancy prevention rose significantly between 1994 and 2004, from 5% to 19%, and a similar situation also occurred in eight Latin American countries where use of condoms among single women aged 15–24 increased faster than reliance on any other contraceptive methods (Blanc, 2009). However, contraceptive discontinuation and contraceptive shift to other methods are very common, especially among adolescent women in which the use of contraceptives is less consistent than that of adult women (20-49 year-old), with a much higher failure rate. Furthermore, although levels of sexual activity and contraceptive use are both substantial among adolescents in the developing world, the upward shift in the level of sexual activity tends to be faster than the level of contraceptive use (Blanc, 2009).

Many studies have documented the importance of the cultural context of safe sex in shaping and constituting risk-related relationships and practices. In the United States where perceived social approval of pre-marital sex is high, the frequency of unmarried young adults practising sex before marriage is also high (Regnerus & Uecker, 2011). As a reflection of this, in 2006, 750,000 women younger than 20 years old in the United States became pregnant (Guttmacher Institute, 2010). The pregnancy rate was 71.5 pregnancies per 1,000 women aged 15–19 or 152.8 pregnancies per 1,000 women among sexually active American teenagers (Guttmacher Institute, 2010). Unfortunately, the report did not distinguish between married and unmarried teens who became pregnant. However, in an unrelated report, it was mentioned that 79% of teenage pregnancies in the United States were to unmarried teens (Donofrio, 2008).
Furthermore, in the United States, between one-fifth and one-third of reported cases of STIs (syphilis, gonorrhoea and chlamydia) were diagnosed in adolescents and young adults (Rosengard, Adler, Gurvey, & Ellen, 2005). In more recent data, although teens and young adults comprised only 25% of the sexually active population, they were responsible for more than half of gonorrhea infections and nearly 75% of chlamydia infections in the United States (Centers for Disease Control and Prevention, 2010b). A recent study assessing attitudes of United States heterosexual college-aged men and women about condoms and condom use found that women were significantly more likely to consider condoms to be less protective, while men were significantly more likely to consider condoms as more interruptive (Hill, Amick, & Sanders, 2011). One study in the United States specifically looked at condom use and consistency among teen males and found that only 50% of participants reported using a condom consistently with their most recent sexual partner (Manlove, Ikramullah, & Terry-Humen, 2008b).

In the United States, casual sex is common on college campuses and ‘hookups’ are considered a normal sexual practice among college students (Paul & Hayes, 2002; Welsh, Grello, & Harper, 2006). More recent data suggest some behaviour changes. For example, in the United States more teenagers are choosing not to have sex (Chandra, Mosher, Copen, & Sionean, 2011), whilst in other countries, Indonesian for instance, the trend is in the other direction (Badan Pusat Statistik & Macro International, 2008b; Blanc, 2009).

According to the Innocenti Report Card (UNICEF, 2001), at least 1.25 million, mostly unmarried, teenagers in countries that are part of the Organisation for Economic Co-operation and Development (OECD) become pregnant each year. This high prevalence is an indicator of low use of condoms and other contraception even in
countries that are perceived to have better knowledge of safe sex and access to condoms. A UNICEF (2001) study reported that more than two thirds of young people have sexual intercourse while still in their teens. In Denmark, Finland, Germany, Iceland, Norway, the United Kingdom and the United States, the proportion is over 80%. In Australia and the United States (UNICEF, 2001) approximately 25% of 15 year-olds and 50% of 17 year-olds had had sex, and as many as 38% of 15 year-olds in the United Kingdom had had sex (Adamson, Bradshaw, Hoelscher, & Richardson, 2007). An updated Innocenti Report Card showed that the mean percentage of OECD teenagers that had had sexual intercourse by the age of 15 year-old was 23.6% (Adamson et al., 2007).

S. J. Lee et al. (2005), in their research exploring sexual behaviour and screening for chlamydia and gonorrhea in heterosexual university students in South Korea found that only 10% of male and 8% of female sexually active university students reported consistent use of condoms. This low rate of condom use and multiple partners were associated with STI prevalence among the sample. Moreover, HIV infection has become more common among Taiwanese teens and young adults despite a drop in the total number of cases. According to the Taiwan Centre for Disease Control, over 90% of the young HIV carriers contracted the disease through unsafe sex (Center for Disease Control Republic of China, 2011). In India, only 7% of young women and 27% of young men who had had pre-marital sex had ever used condoms (Santhya, Acharya, & Jejeebhoy, 2011). In China, among sexually active unmarried females, 23% had had unintended pregnancies, of which 91% were terminated through induced abortion (Zheng, Chen, and Gao as cited in Guo & Zheng, 2012). These trends clearly indicate low self-protection employed by young adults in a range of countries.
Condom use has also been explored in under-developed countries. For example, in Nicaragua, one of the poorest countries outside Africa, where 46% of the population lives below the national poverty line (World Bank, 2008), the use of condoms among young adults has also been reported to be low. In early research in Nicaragua, results showed that men and women believe condoms should be used mainly with sex workers to prevent STIs (Egger et al., 2000). The use of condoms for contraception was mentioned by about 50% of women but only by a few men. Similar results were seen in a survey of young people. Condom use was closely associated with sex workers (Egger et al., 2000). In another study, it was found that 90% of participants had not used a condom in their first sexual encounter despite 62% of men and 55% of women having anticipated their first sexual experience (Rani, Figueroa, & Ainsle, 2003). It has been proposed that cultural taboos that surround sexuality in Nicaragua has resulted in resistance to developing a safe sex strategy (Instituto Centroamericano de la Salud, 2009).

In Africa, for example among the Maasai people of East Africa who live in southern Kenya and northern Tanzania, skepticism about the practicalities of condoms abound, including doubt that the thin material of a condom could prevent a deadly disease. The quality of ‘good sex’ is also defined differently by the Maasai people who define it as the ‘giving’ of sperm from men to women for the benefit of women. It is believed that sperm is essential to the social and physiological development of young girls, and thus using a condom is considered to be wasting sperm (Coast, 2007).

Overall, these studies demonstrate how cultural and psychosocial factors affect the practice of sex and safe sex in young people. Although the extent of condom use in young Indonesian adults needs further exploration, all indications are
that it is low (Mawu et al., 2011; Spratt, 2007). There are a number of potential reasons why condom use in Indonesian young adults is low. In an effort to find factors that affect the delivery of HIV/AIDS prevention programs in the United States, Chillag et al. (2002) classified factors into four classifications: (1) sociocultural, such as stigma/bias and conservative political environments, (2) structural, such as legal and policy issue (3) organisational, such as lack of resources, and (4) individual, such as perceived low risk of HIV/AIDS.

In Indonesia, the sociocultural factor that affect the HIV/AIDS prevention effort is most likely related to the self-notion of Indonesia being a religious country with nilai-nilai ketimuran (‘Eastern values’) (Nef-Saluz, 2007; Parker, 2010; Rowe, 2009), although Indonesia itself is neither a secular state nor an Islamic state. Hence, authorities have been reluctant to consider that many young people are now engaging in sex before marriage (Handajani, 2008). The terms pergaulan bebas (‘free socialising’) and seks bebas (‘free sex’), used to describe sexually active young people and/or homosexual practice, have always been associated with ‘Western cultures’ (Handajani, 2008; Rowe, 2009; Said, 2013; Suryakusuma, 2012; Webster, 2010). Consequently, the STI prevention efforts of non-government organisations funded by foreign health programmes are considered to be providing promotion of ‘free sex’ and marketing on behalf of condom companies (Ashary, 2011; Prasetyo, 2009). Rather than deal with the sexual health of unmarried adolescents and young adults, many Indonesian societies focus on trying to reduce exposure to ‘Western

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4 For example, the first principle of Indonesia's philosophical foundation (Pancasila) is "Belief in the one and only God". The country’s blasphemy law makes it illegal to promote atheism or other faiths except six official religions recognized by the government (The International Humanist and Ethical Union, 2012). Recently, the Indonesian Constitutional Court also rejected the application to review the Blasphemy Law lodged by a coalition of non-government organizations and several prominent individuals. The court openly noted "the difference between the practice of religion in Indonesia from other countries, particularly in the West" (Crouch, 2012, p. 2) and that the court expressly declared that "there was no possibility of a campaign for ‘freedom not to have a religion’ in Indonesia, and that this distinguishes the law of Indonesia from law in the West" (Crouch, 2012, p. 3).
culture’ in order to keep unmarried young people sexually inactive (Handajani, 2008). Prevention efforts are frequently associated with moral and religious teaching. For example, in 1996 when large-scale prevention efforts in Indonesia were started, the Islamic guidebook of AIDS Education published by Indonesia Health and Social Welfare Department concluded that one possible cause of AIDS is a curse from God (Pusat Penyuluhan Kesehatan Masyarakat DepKes, 1996).

This second factor is structural factor, in particular legal and policy issues, whereby the Indonesian National AIDS Strategy proposes that all messages of HIV/AIDS prevention should be socially, culturally and religiously appropriate (National AIDS Commission, 2007). This is expressed in the ‘ABC’ concept (abstinence, faithfulness, and condom use). To be socially and religiously appropriate, the practice of abstinence is promoted to the unmarried population, while faithfulness and condom use are promoted to the married and sexually active populations. The ‘ABC’ approach is often associated with Uganda and is credited with drastically reducing HIV infection in the country in the 1990s, although in fact the ‘ABC’ approach incorporates messages which were used before Uganda's HIV prevention campaigns (Avert, n.d.-a; Okware, Kinsman, Onyango, Opio, & Kaggwa, 2005). According to UNAID's 2004 Global Report on the AIDS Epidemic, ‘ABC’ stands for Abstinence (not engaging in sex, or delaying first sex); Being safer, by being faithful to one's partner or reducing the number of sexual partners; and Correct and consistent use of condoms (UNAIDS, 2004a). However, although UNAIDS referred to this concept as a combination approach that can be adapted to context, population and stage of the epidemic, this approach is not a 'population specific' approach. UNAIDS itself points out that the approach is 'of limited value' to many women and girls, as they cannot negotiate safe sex with partners or choose to abstain
from sex. Perhaps for these reasons, UNAIDS does not make specific mention to the ‘ABC’ approach to HIV prevention in subsequent publications (Avert, n.d.-a).

Despite the fact that the concept and its effectiveness are highly debated, the Indonesian government still adopts this approach as the official prevention approach for HIV acquired through sexual transmission in the National HIV and AIDS Strategy and Action Plan 2010–2014 (National AIDS Commission, 2010). Moreover, still in relation to structural factors, the Indonesian Criminal Law (KUHAP pasal 283 and 534) prohibits anyone exposing any contraceptive device to unmarried people under 17 years with a penalty of up to 9 months jail or a fine of Rp 9,000 (pasal 283) and/or a penalty of up to 2 months jail or a fine of Rp 3,000 (pasal 534).

The third factor that offers an explanation for low condom use in Indonesian unmarried young adults is the organisational factor, in particular related to the lack of resources as reflected in potential inadequacy of the content of STI and HIV/AIDS prevention programmes, including inadequately addressing reproductive health and gender roles issues (I. D. Utomo et al., 2009).

Although further research is required related to the role of these three factors in condom use in Indonesia and to the manner in which they interact, the fourth factor in Chillag et al.’s (2002) classification, individual variables, is the major focus of the research conducted in this thesis. These factors include knowledge, beliefs, attitudes and skills. However, these individual factors do not occur in a vacuum. For instance, condom use may require knowledge, agreement and communication (de Visser & Smith, 1999, 2001b; Liku et al., 2005; Manlove et al., 2008b) but acceptable communication practices are culturally determined and may involve gender and power relationships and even religious influences.
Conclusion

In light of the wide variation across countries, cultures and social contexts in
safe sex attitudes and behaviours, assumptions cannot be reliably made about safe sex
attitudes and behaviours within young Indonesian adults on other observations in
other countries. However, attitudes, beliefs and behavioural practices related to safe
sex in unmarried young adults in Indonesia have not been extensively explored.
While it is potentially inappropriate to apply prevention strategies used in Western or
African cultures without considerable adaptation and modification, alternatives need
to be developed in light of current Indonesian norms and values. In order to better
inform future prevention strategies, further research is required to explore perceptions
of attitudes, beliefs and practices in relation to sexual relationships and condom use in
young Indonesian adults.
According to Stroebe (2011), the study of health behaviours is based upon assumptions that leading causes of death are due to behaviour patterns and that these behaviours can be modified. As a result, the need to identify factors that underlie health behaviours and the need to design behavioural change interventions have become the major focus in health psychology and other related fields of research (Conner & Norman, 2005).

The health behaviours that have attracted the attention of research are varied, ranging from health enhancing behaviours such as healthy eating or attending aerobic exercise classes, and health impairing behaviours like smoking, through to health protective behaviours such as condom use (Conner & Norman, 2005; Stroebe, 2011). The factors that have been investigated as potentially predicting health behaviours can be classified into two categories: factors that are intrinsic to the individual (e.g., personality, cognitions, social supports) and factors that are extrinsic to the individual, which can also be divided into incentive structures (e.g., subsidising sporting facilities, taxing cigarettes) and legal restrictions (e.g., banning smoking in a restaurant) (Conner & Norman, 2005). The majority of psychological studies, including investigation of HIV risk related behaviours, have focused on the first of these factors with most emphasis on cognitive variables, and are commonly referred to as “social cognition models”.

Social cognition is concerned with how individuals select, interpret, remember, and use social information to make judgements and decisions (Conner & Norman, 2005). In the field of health behaviours, social cognition models have
generally been able to provide improved understanding of who performs health behaviours and have been shown to be successful in guiding promotion of health behaviour change to adopt a healthier way of life (Imogen & Sutton, 2005).

Furthermore, these social cognitive factors are assumed to be important causes of behaviours that mediate the effects of many other determinants (e.g., social class) and are assumed to be more open to change than other factors (e.g., personality) (Conner & Norman, 2005).

In the domain of health psychology, social cognition models can be divided into two types (Conner & Norman, 2005). The first type may be described as attribution models, which focus on individuals’ causal explanations of health related events and on how people respond to serious illnesses (e.g., heart disease, diabetes). The second and more common type in health psychology, are prediction models, which focus on individuals’ cognitions in order to explain and predict future health behaviours (Conner & Norman, 2005). Social cognition models used commonly in this area include: the Health Belief Model (HBM) (Becker, 1974), Self-efficacy Theory/Social Cognitive Theory (SCT) (Bandura, 1977, 1997), Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975), TPB (Ajzen, 1985), Self Regulation Theory (Leventhal, Nerenz, & Steele, 1984), Health Locus of Control (Wallston, Wallston, & DeVellis, 1978), Protection Motivation Theory (PMT) (Rogers, 1975), Transtheoretical Model of Change (Prochasca & DiClemente, 1984), Precaution Adoption Process (Weinstein, 1988), Theory of Interpersonal Behaviour (Triandis, 1977), and Theory of Trying (Bagozzi, 1992).

Of these social cognition models, there are five models that are most commonly used in the area of STI/HIV-risk related behaviours. These models are the HBM, TRA, TPB, PMT, and SCT. These theories belong to the family of
expectancy-value models, which are based on the assumption that decisions to perform a particular action are based on two types of cognition: elaborate subjective probabilities that a given action will lead to expected outcomes, and evaluation of the outcomes which are usually associated with the highest expected utility (Conner & Norman, 2005; Stroebe, 2011). Below is a brief description of each commonly used model to explain and predict STI/HIV risk related behaviours.

**HBM**

The HBM (Becker, 1974) was the first of the theories that tried to explain and predict health behaviours. The model was developed in the 1950s by social psychologists in the US Public Health Service (Rosenstock, Stretcher, & Becker, 1994). The HBM was originally developed for the purpose of understanding the widespread failure to accept participation in programmes such as tuberculosis screening (Hayden, 2009; Smedslund, 2000) which were freely available and conveniently located (Family Health International, 2003).

The key variables in this model include perceived susceptibility, perceived severity, perceived benefits, perceived barriers, health motivation and cues to action. The combination of perceived susceptibility with perceived severity determines the perceived threat, while the combination of perceived benefits and barriers will result in a certain belief in the effectiveness of a particular health behaviour (see Figure 1, next page). Accordingly, a health behaviour is more likely to be carried out if an individual perceives a threat of disease and believes that benefits can result from performing the behaviour with minimal barriers. Likewise, if someone is motivated to care for his or her health, health behaviour is more likely to be carried out as well. Furthermore, Rosenstock (1974) suggested that to trigger an appropriate health
behaviour, a “cue to action”, such as viewing a relevant public health advertisement, might be necessary.

Figure 1. The Health Belief Model (Source: Adapted from Stroebe, 2000; Conner & Norman, 1996).

Most research shows that the HBM has been useful in predicting and framing health behaviours. Its simplicity has enabled researchers to identify constructs that may be important, thus increasing the probability that a theoretical base will be used to frame research interventions. Its simplicity, however, also creates some of its major limitations (Champion & Skinner, 2008). Many studies have found limited support for this model. In a meta-analysis, it was concluded that the HBM constructs vary in their effectiveness as predictors of behaviour and that “based on the weakness of two of the predictors, the continued use of the direct effects version of the HBM is not recommended” (Carpenter, 2010, p. 661).
The main criticism of this model is usually based on the theoretical basis that the relations between components of the HBM have never been clearly formalised (Armitage & Conner, 2000; Stroebe, 2011), and hence many researchers operationalise the model in their own way. Furthermore, the HBM has been criticised because, despite its origin in expectancy-value theory, the HBM does not specify the methods of measuring model elements and the interrelationships among elements. It also does not measure the perception of outcome and subjective evaluation which are integral to expectancy-value models (Montano, 1986). Although substantial HBM measurement work has occurred in many areas, the HBM has never had the kind of broad-based standardised measurement approaches that other models such the TPB (Brewer & Rimer, 2008) have had. Sheeran & Abraham (2005) have suggested that there is no evidence for discriminant validity between HBM elements and variables from other models.

In the context of HIV-preventive behaviour, the relationship between perceived susceptibility to negative outcomes of risky sexual behaviour, such as becoming HIV-positive or contracting STIs - and condom use, varies across studies (Champion & Skinner, 2008). Some researchers have found a significant relationship between condom use and perceived susceptibility while others have not (Hounton, Carabin, & Henderson, 2005). According to Champion and Skinner (2008), measurement issues may explain some of the discrepancy. Indeed, two decades ago, Rosenthal, Hall, and Moore (1992) argued that the HBM does not provide a satisfying explanation of sexual risk taking. The lack of inclusion of important determinants of non-health factors such as the nature of the relationship and sexual decision-making limits the predictive power of this model.
PMT

The PMT (Rogers, 1975) is closely connected to the HBM but has some additional variables. According to this model, health behaviour is represented by adaptive coping (advantageous to health) and maladaptive coping (destructive to health). Similar to HBM, motivation to engage in health protective behaviour will depend on two cognitive processes: threat appraisal and cognitive appraisal. Threat appraisal is determined by perceived vulnerability and perceived severity, while coping appraisal is determined by the usefulness of response-efficacy (i.e., effectiveness of the recommended behaviour in removing or preventing possible harm) and self-efficacy (i.e., belief that one can successfully enact the recommended behaviour) (Figure 2).

Figure 2. Protection Motivation Theory
Thus, according to this model, an individual will be more motivated to engage in health protective behaviour if s/he perceives threat and perceives response-efficacy and self-efficacy, unless s/he believes that there are advantages in maladaptive behaviour and/or the costs incurred by performing the adaptive behaviour outweigh its benefits (Cismaru, Deshpande, Thurmeier, Lavack, & Agrey, 2010; Rogers, 1975).

Similar to HBM, the PMT has been adapted to explore a variety of health behaviours such as sun protective behaviour (Prentice-Dunn, Mcmath, & Cramer, 2009), protecting children from myopia (Lwina & Saw, 2007), injury prevention (Ashida, Heaney, Kmet, & Wilkins, 2011), alcohol use (Cismaru et al., 2010; Cismaru, Lavack, & Markewich, 2008), improving tobacco warning labels (Cismaru & Lavack, 2007) and HIV/AIDS related health behaviours (Gong et al., 2009; Lin et al., 2010). PMT has also been used to understand non-health behaviours, such as to understand individual security behaviour of computer use (Crossler, 2009).

Empirical comparisons have generally favoured the PMT over the HBM. One possible reason for this is the inclusion of the self-efficacy concept by the PMT (Cismaru, 2006). (For a more detailed review of self-efficacy, see “Social Cognitive Theory” in this chapter). A review of PMT has also shown that its variables are useful predictors of health-related intention (P. Norman, Boer, & Seydel, 2005), particularly its threat and coping appraisal components (Milne, Sheeran, & Orbell, 2000). Furthermore, Norman, Boer and Seydel (2005) reported that the PMT is useful as the basis for developing theory-based health interventions, although another meta-analytic study revealed the relatively small to average correlations of all its components (Milne et al., 2000). Milne et al. then argued that although the model has been found to be useful in predicting concurrent behaviour, it has been shown to have less utility in predicting future behaviour. This argument is congruent with Sutton’s
(1998) suggestion that programme interventions with low predictive power would
exert minimal impact. In general, the PMT has been less widely criticised than the
HBM although many of criticisms of the HBM also apply to the PMT.

SCT and Self Efficacy

This model stemmed from the Social Learning Theory and was being
developed by Bandura in 1977 (Bandura, 1977), although he did not officially launch
the theory until 1986 in his book *Social Foundations of Thought and Action: A Social
Cognitive Theory* (Bandura, 1986). According to Bandura (2011), the word “social”
in the theory title acknowledges the social origins of much human thought and action;
while “cognitive” recognizes the influential contribution of cognitive processes to
human motivation, affect, and action.

The SCT is founded on the concept of causation described as triadic reciprocal
causation (or reciprocal determinism as previously labeled) (Bandura, 2001).
Bandura (1994) argued that the function of human beings can be explained by the
interactions of personal determinants, behaviour and environmental influences. The
interactions are dynamic in nature and therefore the influence of each determinant is
not equal in strength, as is the case in many other models, which also implies
that the relative importance of model components may vary at different times.

The theory proposes that there are three important psychosocial components
of health behaviour: (a) perceived self-efficacy which refers to “beliefs in one’s
capabilities to organise and execute the courses of action required to produce given
levels of attainments” (Bandura, 1998, p. 624); (b) situation-outcome expectancies
which relate to perception of consequences that are based on environmental events
without personal control; and (c) action-outcome expectancies, in which outcomes are
based primarily on personal action (see Figure 3) (Armitage & Conner, 2000; Luszczynska & Schwarzer, 2005).

Like other social cognition models, SCT has also been used to explain and predict health related behaviours such as physical activity (Basen-Engquist et al., 2011; Plotnikoff, Lippke, Courneya, Birkett, & Sigal, 2008; Winett, Williams, & Davy, 2009), nutrition behaviour (Anderson, Winett, & Wojcik, 2007), eating behaviour (Ball et al., 2009), modeling behaviour (Nabi & Clark, 2008), and HIV prevention (Li, Zhang, Mao, Zhao, & Stanton, 2011) as well as non-health behaviours (e.g., Chiu, Hsu, & Wang, 2006; Weber & Shaw, 2009; Zikic & Saks, 2009).

In the context of STI/HIV risk related behaviours, perceived self-efficacy has been found to be related to increased safe sex negotiation, intention to use condoms and actual condom use behaviour (Johnston, 1999; O'Leary, Jemmott, & Jemmott, 2008). In fact, SCT (and its older version, the Social Learning Theory) were appraised as frameworks that were most consistently used in successful HIV reduction/prevention programmes (DiClemente et al., 2008).
However, most researchers have only tested the self-efficacy component of the theory (Johnston, 1999). Armitage and Conner (2000) have argued that typically the dominant predictor is indeed self-efficacy, which has often become the principal focus of research interest. Furthermore, since a number of health behaviour models incorporate self-efficacy (such as TPB and PMT), they argued that the concept of self-efficacy is probably more significant than the SCT itself (Armitage & Conner, 2000). A number of research studies confirm this assertion by showing that self-efficacy has been found over and above other model determinants to increase the prediction of intention and behaviour (Armitage & Conner, 2000).

**TRA and TPB**

The TRA (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975), and its extension the TPB (Ajzen, 1985, 1991; Ajzen & Madden, 1986), were developed as general social psychological models of behaviour change, but have made significant contributions towards understanding health related behaviours. Both theories are cognitive-decision making theories that attempt to explain behaviour as being a result of logical and rational psychological processes (Rye, 1997; Sandberg & Conner, 2008). Thus, according to these models, people make behavioural decisions based on the information available to them rather than on spontaneous action. The TRA and TPB are expectancy-value models that are based on subjective expected utility theory (Manstead, 2011; Sparks, 2000). This subjective utility theory posits that in making a decision, people are assumed to assess the possible outcomes and choose an action that has the highest utility (Ajzen & Fishbein, 2000; van der Pligt & de Vries, 1998) and these beliefs must be readily accessible (Ajzen, 2011b).

The TRA and the TPB are identical with the exception that the TPB includes an additional construct, perceived behavioural control (PBC) in an attempt to predict
behaviours that are not under volitional control (see the description of the model in the next section for more details).

According to these models, the predictive power of intention to perform a behaviour on actual behaviour will depend on some prerequisites. First, the principle of compatibility must be observed, which means that the level of generality or specificity of intention and behavioural criterion must be correspondent (Ajzen & Madden, 1986). For example, to predict a specific behaviour such as condom use in the next sexual encounter, the intention has to be measured to the same level of specificity (i.e., intention to use condom in the next sexual encounter). To help evaluate the degree of compatibility between intention and behaviour, Ajzen and Fishbein (1977) developed criteria that are commonly referred to as TACT: target, action, context and time. The measurement is compatible if the four criteria are assessed at the same level of generality or specificity. This applies to all TPB/TRA constructs (attitude, subjective norm, PBC, and intention).

The second prerequisite to improve the predictive power of intention is that the time interval between the assessment of intention and the actual behaviour has to be short enough. Ajzen & Madden (1986, p. 455) argued that “the longer the time interval, the more likely is the occurrence of unforeseen events that may change the intention”.

To date, the TRA and TPB have been the most extensively tested models of behaviour change and rank among the most influential theoretical models in the field of social psychology (Ajzen, 2001; Armitage & Conner, 2001; Manstead, 2011; McEachan, Conner, Taylor, & Lawton, 2011; Stroebe, 2011; Webb & Sheeran, 2006). One of the advantages of these theories is their parsimony, in the sense that they contain few but powerful constituents that predict a vast array of behaviours (Cheng
& Ng, 2006; D. P. French et al., 2005; Perugini & Bagozzi, 2001). However, the sufficiency of the TRA and TPB has been questioned with the suggest that a number of additional variables might usefully be added to the models in order to capture a significantly greater proportion of the variance in intention or behaviour (Conner & Armitage, 1998). It has been proposed that while the introduction of other variables into the models might affect the theoretical parsimony achieved in the TRA/TPB, researchers should not be bound to it (Rhodes, Plotnikoff, & Spence, 2004). Indeed, according to Ajzen (1991):

> The theory of planned behavior is, in principle, open to the inclusion of additional predictors if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory’s current variables have been taken into account. (p. 199)

Both models have been mainstays in social psychology for many years and continue to be a major focus of research, both in order to advance the theories and to provide a framework for applied research.

**Description of the TRA**

According to the TRA, the immediate antecedent of an individual’s behaviour is intention to perform the behaviour (or simply intention) (Fishbein & Ajzen, 1975). Intention is assumed to capture the individual’s motivations that influence a decision as to whether or not the behaviour in question should or should not be performed. In other words, intention can be conceptualized as a readiness to engage in a particular behaviour (Fishbein, 2008). Intention itself is a function of attitude (the overall positive/favourable and negative/unfavourable evaluation of a particular behaviour) and subjective norm (perceived social pressure from significant others whether to perform or not perform the behaviour). In short, the more favourable the attitude and
the more powerful the subjective norm, the stronger the intention to perform a particular behaviour.

Attitude, in turn, is produced by an individual’s behavioural beliefs that performing a particular behaviour will lead to the expected outcomes weighted by evaluation of the possible outcomes (Fishbein & Ajzen, 1975). The subjective norm is produced by an individual’s belief about the normative prescriptions of significant others weighted by the motivation to comply with each referent (Figure 4).

Thus, according to this model, beliefs, which are defined as the “subjective probability that the object has a certain attribute” (Ajzen & Albarracin, 2007, p. 5), provide the basis for the formation of attitudes and subjective norms.

The model can be represented by the following equation:

\[ I = A_Bw_1 + SN_Bw_2 \]

where \( I \) is the intention to perform behaviour \( B \), \( A_B \) is the attitude towards performing the behaviour \( B \), \( SN_B \) is the subjective norm regarding behaviour \( B \), and \( w_1 \) and \( w_2 \) are weights for \( A_B \) and \( SN_B \) respectively (Albarracin, Fishbein, Johnson, & Muellerleile, 2001; Conner & Sparks, 2005).
Attitude, in turn, is a function of behavioural belief and outcome evaluation, which can be represented as follows:

\[ A_B = \sum_{i=1}^{p} b_i e_i \]

where \( A_B \) is the attitude towards performing behaviour \( B \), \( b_i \) is the strength of the belief that performing behaviour \( B \) will lead to outcome \( i \); \( e_i \) is the evaluation of outcome \( i \), and \( p \) is the number of salient or accessible attributes; and because the model assumed that attitudes are belief based, this measure is therefore called indirect attitude (Albarracin et al., 2001; Conner & Sparks, 2005).

Subjective norm is a function of normative belief and motivation to comply. The representation for subjective norm is as follows:

\[ SN_B = \sum_{j=1}^{q} n_{bj} m_j \]

where \( SN_B \) is the subjective norm towards behaviour \( B \), \( n_{bj} \) is the normative belief that significant other \( j \) thinks the respondent should or should not perform the behaviour, \( m_j \) is the motivation to comply with referent \( j \), and \( q \) is the number of referents. This subjective norm is also assumed to be based on beliefs and therefore it is an indirect subjective norm (Albarracin et al., 2001; Conner & Sparks, 2005).

Ajzen and Fishbein (Ajzen, 2002; 1980; Fishbein & Ajzen, 2010) recommended pilot work before conducting studies using the TRA in order to ascertain the salient or accessible beliefs of each TRA construct that are relevant in the population being studied. Using these findings, modal accessible beliefs (i.e., most commonly mentioned) and personal accessible beliefs (i.e., given by a
participant) may then be used in constructing the main assessment instrument to be used in the research (Ajzen, 2002, 2006). The theory proposes that these accessible beliefs are considered to be the prevailing determinants of a person’s attitude (Ajzen & Fishbein, 2000; Fishbein & Ajzen, 2010).

According to the TRA, factors such as personality and individual differences will not directly affect the prediction of behaviour, since such factors manifest themselves in different beliefs, evaluations of these beliefs, normative beliefs, motivation to comply, attitudes, and/or subjective norms (Montaño & Kasprzyk, 2008; Rye, 1997). Although attitudes and the subjective norm are the determinants of intention, the theory does not suggest that each determinant will make a significant or equal contribution to the prediction of intention (Ajzen, 2011b). The relative importance of each factor will depend upon the nature of the behaviour being measured, the situation and the population (Montaño & Kasprzyk, 2008). For example, some literature reviews have demonstrated that attitudes towards a behaviour in general have more predictive power than subjective norms (Ajzen, 1991; Albarracin et al., 2001; Albarracin et al., 2003; Fisher, Fisher, & Rye, 1995; Hagger, Chatzisarantis, & Biddle, 2002; Krahe & Reiss, 1995; Reinecke, Schmidt, & Ajzen, 1996; Serovich & Greene, 1997; White, Terry, & Hogg, 1994). However, in other studies, subjective norms have been found to be better predictors than attitudes (e.g., Albarracin, Kumkale, & Johnson, 2004; Armitage & Talibudeen, 2010; Durantini, Albarracin, Mitchell, Earl, & Gillette, 2006; Richard, de Vries, & van der Pligt, 1998; Sutton, Mc Vey, & Glanz, 1999). Of the studies referred above, research by Albarracin et al. (2001); Albarracin et al. (2004); Albarracin et al. (2003); Armitage and Talibudeen (2010); Durantini et al. (2006); Fisher et al. (1995); Krahe and Reiss (1995); Reinecke et al. (1996); Richard et al. (1998); Serovich and Greene (1997);
Sutton et al. (1999); White et al. (1994) were all related to the topic of safe sex, HIV prevention and condom use.

**Description of the TPB**

The TRA assumes that most social behaviours are under volitional control, and therefore intention alone – which is determined by attitude and subjective norms — is sufficient to predict the behaviour (Ajzen, 2011b). This assumption has been the source of criticism of the theory, mostly because there are many social behaviours that, in fact, are not entirely under people’s volitional control (Al-Lozi & Papazafeiropoulou, 2012; Frymier & Nadler, 2009). Ajzen (1985, 1991; Ajzen & Madden, 1986) tried to overcome this limitation by introducing the TPB, which is the TRA model with the inclusion of PBC. Ajzen (1988) argued that even if one has an intention to perform a behaviour, it will not be performed if one perceives lack of control over the performance regardless of how favourable are attitudes and subjective norms. Thus, “the construct of perceived behavioral control was added in an attempt to deal with situations in which people may lack complete volitional control over the behaviour of interest” (Ajzen, 2002, p. 2).

It is, therefore, expected that PBC will provide information as to why intentions do not always predict behaviour. As in the TRA, the extent of predictive power of PBC will depend on the type of behaviour, the population being studied and the nature of the situations. For example, in the situation where attitudes are strong or subjective norms are powerful, PBC might be less predictive (Armitage & Conner, 2001). As with attitude and subjective norm, PBC is also based on corresponding beliefs—namely control beliefs, which are concerned with the person’s perceived control or power over specific factors that facilitate or inhibit performance of the behaviour (Ajzen, 1991; Armitage & Conner, 2001). The belief-based measure of
PBC is obtained by multiplying belief strength and power (Ajzen, 2002) as represented in this following equation:

\[ PBC \approx \sum_{k=1}^{n} c_k p_k \]

where PBC is perceived behavioural control, \( c_k \) is the perceived frequency or likelihood of occurrence of factor \( k \), \( p_k \) is the perceived facilitating or inhibiting power of the factor \( k \), and \( n \) is the number of control factors (Conner & Sparks, 2005).

Within this framework, PBC is believed to affect both intentions and behaviours when the behaviours are beyond volitional control (Al-Lozi & Papazafeiropoulou, 2012; Frymier & Nadler, 2009). The theory assumes that with greater perceived control, the intention to perform the behaviour will become stronger. It is also expected that PBC should moderate the relationship between intention and behaviour (Armitage & Conner, 2001). Furthermore, Ajzen (1991, 2002, 2011b) also argued that in the event where PBC is veridical, it can serve as a proxy for actual control and independently predict behaviour directly (see Figure 5, next page).

Ajzen (2002) admitted that the concept of PBC is not original to the TPB as a similar idea can also be found in Bandura’s SCT (Bandura, 1977) of self-efficacy. However, besides its similarity to the perceived self-efficacy concept (that is, both are concerned with perceived ability to perform behaviours), Ajzen (2002) has always maintained that PBC differs from Bandura’s self-efficacy.
According to Manstead (2011), the PBC construct can be conceptualised in either of two ways, that is it can be seen as reflecting the extent to which someone believes that he or she has control over performing the behaviour (“Could I perform this behaviour, if I wanted to?”), and the extent to which someone believes that he or she has the ability to perform the behaviour (“I am confident of my ability to perform the behaviour”). The latter aspect of PBC is similar to Bandura’s concept of self-efficacy (Manstead, 2011). Several researchers however, have questioned and investigated the concept and utility of PBC and self-efficacy, since the PBC definition was ambiguous⁵ (e.g., Armitage & Conner, 1999; Sutton, 2002; Terry & O’Leary, 1995). One of the earliest was research by Terry and O’Leary (1995) who found that behavioural control and self-efficacy were empirically distinct. Furthermore, they also found that self-efficacy affected intentions but not behaviour, while

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⁵ In Ajzen’s original work of the TPB, PBC was defined as the “person’s belief as to how easy or difficult performance of the behaviour is likely to be” (Ajzen & Madden, 1986, p. 457). A definition that was very similar to Bandura’s self-efficacy concept.
controllability predicted behaviour but was unrelated to intentions (Manstead, 2011; Terry & O’Leary, 1995). After examination of these two concepts, Ajzen (2002) suggested that the PBC should be read as “perceived control over performance of a behaviour” (Ajzen, 2002, p. 4) while perceived self-efficacy should be seen as the individual’s confidence in their ability to perform a behaviour. Although similar and correlated, Ajzen believes that the components are two distinct concepts, that is, perceived self-efficacy is related more to the perceptions of ease or difficulty of performing behaviour, and perceived controllability is related more to the beliefs about the extent to which performing the behaviour is up to the actor (Ajzen, 2002).

As mentioned earlier, investigations of PBC and self-efficacy provided support for the distinction between these two concepts (e.g., Armitage & Conner, 1999; Manstead, 2011; Montazeri, Hajizadeh, Taremain, & Ghofranipour, 2009; Terry & O’Leary, 1995). However, in a recent development, Ajzen admitted that “Clearly, the concept of perceived behavioural control in the TPB, though focusing on the extent to which people believe that they are capable of, or have control over, performing a given behaviour, is very similar to Bandura’s conception of self-efficacy” (Ajzen, 2011b, p. 446).

Furthermore, Ajzen proposed a hierarchical model of PBC (see Figure 6, next page) that describes the relationship between PBC, perceived self-efficacy and perceived controllability. Thus, according to this model, PBC measurement should include perceived self-efficacy and perceived controllability. Dependent upon the nature of the study, these components can then be assessed separately or in combination.
Reviews of the literature tend to indicate that the TPB has better predictive power than the TRA (Albarracin et al., 2005; Gokhan & Yilmaz, 2011; Hagger et al., 2002; Sheeran & Tra, 2002; Sheeran, Trafimow, & Armitage, 2003; Yzer, 2007). Van den Putte (as cited in Armitage & Conner, 2001) for example, reported that the inclusion of PBC explained an additional 14% of variance in intention and 4% over and above attitude and subjective norm in behaviour. Similarly, Godin and Kok (1996), in a meta-analysis of the TPB compared to the TRA for health-related behaviours, reported an increase of 13% in the variance predicted in intention and 12% in the variance predicted in behaviour. In another meta-analysis examining physical activity as the outcome, it was found that the inclusion of TPB increased the prediction of variance in intention by 7.23% (Hagger et al., 2002).

In a study of predictors of condom use intention in Tanzania, Lugoe and Rise (1999) found that PBC was by far the strongest determinant of behavioural intention ($\beta = .48$) compared to subjective norm ($\beta = .22$) and attitude ($\beta = .11$). However, although Albarracin et al. (2001) in their meta-analysis of the TRA and TPB in relation to condom use found a moderate correlation between behaviour and PBC ($r =$
.24), the influence of PBC on behaviour was very small ($\beta = .05$) after the influence of intention was controlled. This finding confirmed the study of Reinecke et al. (1996), in which the correlation was also moderate, but becoming negligible once the influence of intention was controlled. A likely explanation for such findings is the fact that there is relatively little variance in PBC for many behaviours studied by researchers (e.g., physical activity, eat healthy diet, donate blood, etc.), that although people vary greatly in their intentions, most believe that they can perform them if they desire. Thus, a stronger moderating effect between intentions and PBC is expected only when the population under study varies greatly in their intentions to perform the behaviour of interest and vary in their perceptions of control over the behaviour (Ajzen, 2011b).

The application of the TRA/TPB

The TRA and the TPB have been widely and successfully applied to the prediction of intention to perform a wide range of behaviours (Ajzen, 2011a). Many studies have employed the TRA/TPB to investigate drinking behaviours, blood donation, kidney donation, smoking behaviours, church attendance, class attendance, health screening attendance, exercise behaviours, food choice behaviours, breast/testicle self-examination, oral hygiene behaviours, leisure activities, political behaviours, cheating, lying and shoplifting, drug compliance, job search, pain assessment, wearing safety helmets/seat belts, weight-loss behaviours, having an abortion, contraceptive behaviours and HIV/AIDS preventive behaviours such as condom use, non-penetrative sex, monogamy and abstinence (for review see Ajzen, 1991; Albarracin et al., 2001; Armitage & Conner, 2001; Conner & Sparks, 2005; Cooke & French, 2008; Fishbein & Ajzen, 2010; Godin & Kok, 1996; McEachan et al., 2011; Webb & Sheeran, 2006). Thus, it is clear that the TRA/TPB has wide
application and acceptance as a model for understanding health behaviours, including in the context of safe sex research and campaign (Tlou, 2009; Yzer, Siero, & Buunk, 2000). Ajzen (2011c) claimed that by any objective measure, the TPB has become one of the most frequently cited and influential models for the prediction of human social behaviour.

Ogden (2003, p. 1) in her study that focused on the “most common structured models (HBA, TRA, TPB, and PMT)” in health related behaviours, reported that of 47 empirical articles that appeared in four major journals between 1997-2001, 33 of them had used the TPB, five used the TRA, nine used the HBM, and five used the PMT (five articles focused on two models simultaneously). In more recent literature, TPB is still mentioned as one of the most widely used models for predicting intentions to perform specified behaviours as well as the actual behaviours (D. P. French, Cooke, McLean, Williams, & Sutton, 2007; Glanz, Rimer, & Viswanath, 2008; Kobbeltvedt & Wolff, 2009; Painter, Borba, Hynes, Mays, & Glanz, 2008).

A meta-analyses showed that the TRA and the TPB models explain on average of between 35% and 50% of the variance in intention, and between 26% and 35% of the variance in behaviour (Sutton, 2004). An earlier meta-analysis of the TPB which reviewed 185 studies found 39% of the variance in intention and 27% of behaviour were explained by the TPB (Armitage & Conner, 2001). According to Sutton, while the variances explained were far from the ideal maximum of 100%, they performed well compared to typical effect sizes in the behavioural sciences (Sutton, 2004).

Earlier, Ajzen (1991) in his review of 16 studies found a multiple correlation of 0.71 between the TPB constructs and intention, while for the TRA constructs and intention, Sheppard, Hartwick and Warshaw (1988) from their review of 87 studies
found a slightly smaller multiple correlation of 0.66. Van den Putte (1993, as cited in Conner & Sparks, 2005) found a correlation of 0.68 from 113 studies. Both Sheppard et al. and van den Putte also reported the average correlation between intention and behaviour, which was 0.53 and 0.62, while Randall and Wolff (1994) reported a smaller correlation of 0.45. In a slightly later review of the use of the TRA and the TPB to predict 56 health related intentions and behaviours, Godin and Kok (1996) found an average multiple correlation of 0.64 for predicting intention from attitude and subjective norm, and 0.58 for predicting behaviour from intention.

In a recent meta-analysis study of the TPB (McEachan et al., 2011), the findings were comparable to those from the earlier studies described above. Correlations of attitudes, subjective norms and PBC with intentions ranged from 0.40 to 0.57, producing a multiple correlation of 0.67. The intention–behaviour correlation of 0.43 and the perceived control–behaviour correlations of 0.31 were somewhat lower than in previous meta-analysis, which according to Ajzen (2011c) was most likely due to the fact that McEachan’s (2011) study was restricted to prospective studies that assessed behaviour at some time after administering the TPB survey.

It is noteworthy to mention that the TRA/TPB are usually used in observational, non-experimental studies using cross-sectional or prospective designs or a combination of the two (Sutton, 2002). Of these designs, cross-sectional studies of intention are more common than longitudinal studies of behaviour (T. R. Cohen, Lindblad, Paik, & Quercia, 2009; Topa & Moriano, 2010). While a cross-sectional study design allows researchers to compare many different variables at the same time, it cannot provide definite information about cause-and-effect relationships. In comparison, longitudinal studies allows researchers to detect developments or changes in the characteristics of the target population at both the group and the
individual level (Institute for Work & Health, 2009). Prospective designs therefore are important as data collected in these designs can be used to identify what factors predict change in intention and behaviour.

A number of studies have used prospective designs to examine predictors of intention and condom use behaviour (Boldero, Moore, & Rosenthal, 1992; de Visser & Smith, 2001a, 2004). These studies used two measures of condom use intentions: a trait-like measure of intention or an event-independent measure of general ‘prior intention’, that is an intention formed prior to and independent of a particular sexual encounter; and a contextual, state-like measure of intention or an event-specific measure of ‘intention in action’, that is the intention to use condoms at the time of having sex. By using prospective designs that captured these two intentions, researchers were able to examine the stability of intentions and behaviour and to identify which factors predicted change in intention and behaviour. A number of characteristics of sexual encounters were found to influence intentions in action and subsequent condom use including sexual arousal, condom availability, use of another form of contraception and degree of communication with a sexual partner (Boldero et al., 1992; de Visser & Smith, 1999, 2001a). These findings indicate that predictors of intention in action is not always the same as prior intention (i.e., the TPB variables: attitude toward condom use, subjective norm and PBC). These types of findings are potentially useful in the design of interventions to change condom use behaviour.

Overall, the findings provide support for the predictive utility of the TRA and the TPB in relation to health behaviours generally. The following section reviews research examining ways in which TRA/TPB have been used specifically in relation to safe sex behaviours.
The TRA/TPB and the prevention of HIV/AIDS

The TRA and the TPB have been extensively applied in sexual behaviour research, particularly in relation to the prevention of HIV/AIDS. A dedicated book titled “The Theory of Reasoned Action: Its Application to AIDS-Preventive Behaviour” was published in 1993 (Terry, Gallois, & McCamish) and numerous studies have subsequently used the TRA/TPB as reflected in meta-analysis studies (Albarracin et al., 2001). Most research has focused on predicting and explaining condom use intention (Groeneboom et al., 2009).

By showing the adequacy of statistical goodness-of-fit, Albarracin (2001) demonstrated the plausibility of the TRA and the TPB as models of condom use and concluded that overall, the TRA and the TPB are highly successful in predicting condom use behaviour. In their meta-analysis study, they found that the mean correlation between intention and condom use behaviour was 0.45, which was similar or smaller compared to other meta-analysis studies that focus on a broad range of behaviours (e.g., Ajzen, 1991; Van den Putte, 1991 as cited in Conner & Sparks, 2005; Randall & Wolff, 1994; Sheppard et al., 1988). Johnston (1999), in her literature review, reported that the average explained variance in the intention to use condoms was 38% for retrospective studies, and 22% for prospective studies. In both cases, the maximum variances explained were 79% and 80% respectively.

As suggested by the theories, this variability in findings is expected because of the models dependency on the nature of the behaviour being considered, the population being studied, and the method of study. For example, in the Albarracin et al. (2001) study which solely focused on condom use behaviour, the smaller correlation may be attributed to women’s powerlessness in negotiating condom use. This social context and the nature of the behaviour are obviously different compared...
to the context and nature of other behaviours (e.g., health screening or wearing a
helmet).

In the case of condom use studies, most researchers have favoured the TPB
over the TRA (Schutz et al., 2011). One of the reasons is that condom use is often
beyond an individual’s volitional control (Catania, Binson, Dolcini, Moskowitz, &
vander Straten, 2001; Kashima, Gallois, & McCamish, 1992, 1993), on the basis that
this behaviour needs an agreement from the partner, or that the person may lack
negotiation skills. Theoretically, the TPB with its PBC variable offers better
prediction of condom use. Indeed, many researchers have found PBC to be a
significant predictor of condom use intention and behaviour (e.g., Ajzen, 2011b;
Albarracin et al., 2001; Armitage & Conner, 2001; Carmack & Lewis-Moss, 2009;
Corby, Jamner, & Wolitski, 1996; Godin et al., 1996; E. W. Moore & Berkley-Patton,
2010; Nucifora, Gallois, & Kashima, 1993; Reinecke et al., 1996; Reinecke, Schmidt,
& Ajzen, 1997; Schutz et al., 2011; Wilson, Zenda, McMaster, & Lavelle, 1992).
Some empirical evidence also shows that PBC significantly improves predictions of
intentions and behaviours (e.g., Ajzen, 1991, 2011b; Godin & Kok, 1996; Madden,
Ellen, & Ajzen, 1992; McEachan et al., 2011).

The TRA and the TPB have also inspired some of HIV/AIDS preventive
efforts worldwide, such as AIDS Community Demonstration Projects, Project
RESPECT, preventive software for African Americans, theory-based interventions for
women, counselling and testing interventions in Argentina, abstinence-only
intervention for young adolescents in the United States and a similar programme in
South Africa (Albarracin et al., 2001; Family Health International, 2003; Jemmott,
2012). Furthermore, randomised controlled trials and evaluations of intervention
programmes based on the TRA/TPB have supported the validity of these models
(Ajzen & Fishbein, 2004; Armitage & Talibudeen, 2010; Carmack & Lewis-Moss, 2009; Jemmott, 2012; Jemmott et al., 2010). In light of these findings, the TRA/TPB was considered the best theoretical model to guide the exploration of condom use intention and behaviours in the present study of young Indonesian adults.

Critique of the TRA/TPB

Despite the models’ popularity and support, a number of researchers have criticised the TRA and TPB. This has partly been because of their status as social cognitive theories (Weinstein, 2007), but most common criticisms relate to the structure of the models. They have been perceived as over-simplified (Armitage & Conner, 2000; Eagly & Chaiken, 1993), and in particular it has been noted that they do not take into account the non-attitudinal personal and contextual factors that are likely to influence the strength of the attitude-behaviour relationship or enhance prediction of behaviour (Davies, Foxall, & Pallister, 2002). However, one might argue that one of the strengths of these models is their parsimony (D. P. French et al., 2007; Perugini & Bagozzi, 2001).

This criticism has lead researchers to incorporate additional variables such as past behaviour and habit, personality, partner norm, group norm, moral norm, descriptive norm, behavioural norm, self-identity, social identity, anticipated affect, and anticipated regret (For reviews, see Ajzen, 2011c; Ajzen & Fishbein, 2000; Barkoukis, Lazouras, Ourda, Galanis, & Oxizoglou, 2009; Conner & Armitage, 1998; Courneya, Bobick, & Schinke, 1999; de Visser & Smith, 2001a, 2004; Eagly & Chaiken, 1993; Kor, 2011; Manstead, 2011; P. Norman, & Cooper, Y., 2011; Rhodes & Courneya, 2003; Rise, Sheeran, & Hukkelberg, 2010; Rivis, Sheeran, & Armitage, 2009; Sandberg & Conner, 2008). For example, Ouelette and Wood (1998) and more recently, Sommer (2011), argued that habitual behaviour should directly influence
future behaviour without being mediated by intention. In sleep behaviour research for example, it has been found that past behaviours performed regularly in a stable context (i.e., habit) were stronger predictors of future behaviour than intention (Kor, 2011). Other examples of the significance of additional variables have been described by Terry, Hogg, and White (1999) and Livingstone, Young, and Manstead (2011), who have reported that perceived group norms influence intentions for those who strongly identified themselves with the group. Another review claimed that although the TPB has consistently been found to be a useful predictor of intention and behaviour, it does not provide any direction on intervention (Imogen & Sutton, 2005).

More specifically in the area of safe sex research, researchers have added other variables into the TRA/TPB, such as type of partner, the nature of the relationship, drugs and alcohol influence, level of arousal, communication, self-efficacy, technical skills, previous condom use, anticipated affect, moral norms, and condom availability (Alvarez, Villurruel, Zhou, & Gallegos, 2010; Boldero et al., 1992; de Visser & Smith, 2001a, 2004; Kashima et al., 1993; Molla, Astrom, & Berhane, 2007; Muñoz-Silva, Sánchez-García, Nunes, & Martins, 2007; Turchik, 2010; Turchik & Gidycz, 2012). In the area of safe sex research, one of the major limitations of the TPB – as in other individual rational decision making models — is that the postulated link between intention to use condoms and actual condom use is not strong. Thus, a large proportion of variance in condom use is explained by factors other than an individual’s intention (de Visser & Smith, 1999, 2004). According to de Visser and Smith (1999):

The fact that intentions are not stable and unitary makes clear the limitations of global association studies based on trait-like characteristics of the individual, and focuses attention on the characteristics of specific sexual
encounters which may influence an individual’s prior intention to use a condom. (p. 266)

As mentioned earlier, sexual behaviour is indeed essentially social and interactive in nature and condom use is influenced by the intentions of at least two people. For example, de Visser and Smith (2004) found in their research that the partner’s intention in action was more important than the respondent’s intention in action and it was the strongest predictor of condom use.

Further studies have revealed other factors that may influence condom use after the formation of a prior intention (e.g., Conner & Flesch, 2001; de Visser & Smith, 1999, 2001a, 2004; Jellema, Abraham, Schaalma, Gebhardt, & van Empelen, 2013; Protogerou & Turner-Cobb, 2011; Turchik, 2010). For example, de Visser and Smith (1999) reported that the two most important correlates of condom use found in their research were the event-specific factors of having an agreement about condom use, and not using of another form of contraception. Thus, although TPB variables are important predictors of condom use, there are other variables that influence condom use.

Using prospective studies of extended models of the TPB, researchers have conducted event level analysis that have enabled comparison between event-independent (i.e., prior intention) and event-specific (i.e., intention in action) factors. Common assumptions but ones that were difficult test in original TPB model – such as the influence of alcohol on condom use — were able to be examined. For instance, consistent with studies by Leigh (2002), Leigh et al. (2008) and Morrison et al. (2003) research based on extended TPB models have been able to confirm that drinking alcohol does not necessarily reduce the likelihood of condom

Another criticism that originated outside social cognition traditions came from Kippax and Crawford (1993). Using a social constructionist approach, they argued that the TRA has some serious flaws when it is applied to sexual behaviour research. According to these authors, the major problem of the TRA is its reliance on cognitive structure:

Our basic argument is that such a reliance means that the theory ignores the connection between individuals, both the interpersonal and social relations in which they act, and the broader social structures which govern social practice. Social relations and structures are important, for without them individual behaviours have no meaning. Action is constituted with reference to shared meanings (Kippax & Crawford, 1993, p. 255).

In Kippax’s recent writing, she has asserted that “We also know that past conceptual models based on the notion of the individual rational actor have had limited success” (Kippax & Holt, 2009, p. 25). In line with Kippax and Holt, Catania et al. (2001) have also argued that the focus on individuals in the TRA/TPB is only suitable for understanding health risks that are associated with private activities rather than interpersonal sexual behaviour.

Serious criticism of the TRA/TPB and other social cognition models (i.e., the HBM and the PMT) used in health related behaviours, has also come from Ogden (2003). She has directed her arguments at the conceptualisation of the TRA and the TPB. Although recognising the usefulness of the theories and their pragmatic value in providing a framework in developing interventions to change health related behaviours, she nevertheless has argued that the models are not falsifiable and cannot
be tested. In her review of 47 studies, she concluded that the majority of studies reported inconsistent results and much of the variance in the outcome variables is unexplained. She claims that instead of using the data to challenge the models, most researchers propose alternative explanations. Thus according to her, “All data are used to support the models, but it is not clear what data would enable the models to be rejected. Therefore they cannot be tested” (Ogden, 2003, p. 426). Furthermore, she argued that the postulated relations between constructs are true by definition rather than by observation. She suggests that the models may create cognitions rather than assess them and those cognitions may also change later behaviour.

However, in a reply to Ogden’s assertion, Ajzen and Fishbein (Ajzen & Fishbein, 2004) argued that the conceptualisation of the constructs is clear and specific which allows the models to be tested. According to them, the TRA and the TPB can be rejected if all constructs (i.e. attitudes, subjective norm and PBC) fail to predict intention, which has never happened. Furthermore, statistical analyses have shown that the TRA/TPB does have discriminant validity, which refers to whether concepts or measurements that are supposed to be unrelated are, in fact, unrelated. In other words, it is evidence that a measure is not unduly related to other similar, yet distinct, constructs (Messick, 1989). According to Ajzen and Fishbein (2004), the unexplained variance of the model may be due to random measurement error as indicated by findings using structural equation modelling. It may also be due to lack of variance in the behavioural criterion or due to poor operationalisation of the predictor or criterion measures.

Despite all the criticisms, it is clear that the social cognition models have a high reputation regarding their practical basis. Even Ogden (2003, p. 426) in her critique admitted that “this analysis showed that these models are useful and fruitful
and provide a framework for the development of interventions designed to change health-related behaviours”. Among social cognition models, research over the years does indicate that the TRA and TPB are the most cited theories in HIV/AIDS prevention and have been found to be better predictors of HIV/AIDS health behaviour than other models (Tlou, 2009). It has also been claimed that the TRA/TPB has substantial and effective practical utility in HIV-prevention interventions (Holtgrave, 2007; Muñoz-Silva et al., 2007).

**Summary**

In summary, there are social cognition models available that provide theories on health behaviours. Among all social cognition models, the TPB can be argued to be the prime candidate for guiding research on health behaviours, in particular on safe sex intentions and behaviours, for the following reasons: (1) it is a general theory; (2) the constructs are clearly defined and the causal relationships between the constructs clearly specified; (3) there exist clear recommendations for how the constructs should be operationalised; (4) the theory has been widely used to study health behaviours, including in safe sex research; (5) meta-analyses show that it accounts for a useful amount of variance in intentions and behaviours; and the theory has been used as a basis for developing interventions that show good results (Jemmott, 2012; McEachan et al., 2011; Sutton, 2004). However, as pointed out by a number of researchers as noted above, although the TPB has proven to be a useful model in explaining intentions to engage and actual engagement in a number of health behaviours, many researchers – especially in the area of safe sex research — have encouraged the use of additional variables outside of the TPB framework in order to better predict intentions and behaviours (Turchik, 2010). Therefore, incorporation of contextual variables
needs to be considered to fully understand safe sex behaviours in research investigating safe sex behaviours in young adult Indonesians.
Chapter 5
Overview of the Present Research

In the absence of the availability of a vaccine to prevent HIV and the lack of effective treatment to eradicate HIV and other STIs, it is crucial to prevent HIV/STIs by changing sexual behaviour among Indonesian young adults. However, sexual behaviour, and more specifically safe sex behaviour, is complex and before change can be brought about it needs to be thoroughly understood.

Research into sexual behaviour has provided valuable information in Western countries and these findings have been used as the basis for behavioural interventions as well as social communication to promote the adoption of safe sex in these countries (Albarracin et al., 2001; Armitage & Conner, 2001; DiClemente et al., 2008; Fishbein, 2008; Yzer, 2004). This is also the case in many African countries where the prevalence of HIV/AIDS and STIs is high (Bosompra, 2001; Jemmott et al., 2007; Montaño & Kasprzyk, 2008; L. R. Norman, 2003). However, whilst these approaches have been beneficial and evidence-based in Western and African countries, research into sexual behavioural and specifically safe sex has been rare to date in Indonesia.

The focus of this thesis is, therefore, to understand safe sex behaviour among Indonesian young adults, in particular university students, using the TPB as a guiding theory. However, in relation to safe sex, TPB research has sometimes been criticized as being limited to the Western context in which it has been developed and not necessarily generalisable to other cultural contexts (Airhihenbuwa & Obregon, 2000; Yzer, 2008). Since there has been very little data relevant to young adult sexual behaviour in Indonesia to ensure cultural relevance of research, examination of psychosocial aspects of sexual behaviour in this group was deemed to be an essential first step prior to a deeper exploration of safe sex behaviour. Consequently, this
thesis has been divided into four main areas of study of Indonesian young adult university students: (1) Understanding sexuality and safe sex behaviour; (2) Understanding psychosocial factors associated with sexual practices and safe sex; (3) Predicting intention to use a condom; and (4) Understanding whether intention actually predicts the behaviour of condom use.

Study 1: Defining and Understanding Sexuality and Safe Sex Behaviour in Indonesian Young Adults – A Focus Group Study

Many researchers have criticised psychosocial theories used in HIV/AIDS prevention research because they fail to consider the broader cultural and social context of sexuality which influence individual safe sex practice (Amaro, 1995; Diaz, 2000; Kippax & Holt, 2009). The present research was designed to explore issues related to sexual behaviours and safe sex (condom use) in particular, in unmarried young adults in Indonesia. The main aim of this research was, through a series of focus groups, to explore male and female, Javanese and Chinese Indonesian, perceptions of attitudes and behaviours regarding sexual relationships and condom use in unmarried young adults in Indonesian university students. This information is needed to guide the development of effective prevention interventions for STIs and HIV/AIDS in this population. This study was qualitative in nature and is described in Chapter 6.

The main research questions examined in unmarried heterosexual Indonesian young adult students were:

1. How do young adult students perceive the meaning of sexual relationship?
2. How do young adult Javanese and Chinese Indonesian students perceive sex before marriage?
3. What influences the decision to have or not have sex?
4. What is the common type of first sexual partner?
5. How do young adults construct safe sex?
6. What is the variety of safe sex practices?
7. What are the determinants of safe sex practice?

**Study 2: Understanding Psychosocial Factors Associated with Sexual Practices and Safe Sex**

Studies in Western and African countries have already demonstrated correlations between psychosocial factors (such as SES, gender, religiosity, peer attitudes) and the initiation of sexual activity and safe sex practice (DiClemente et al., 2008; Rani et al., 2003; Rosengard et al., 2005). These psychosocial factors, however, have not been examined in unmarried Indonesian heterosexual young adults. Many political and religious leaders in Indonesia comment on the issue of adolescent sexual behaviour based on speculative and anecdotal data (e.g., sex education is promoting promiscuous behaviour) (Rowe, 2009; I. D. Utomo, McDonald, Reimondos, Hull, & Utomo, 2012). This largely descriptive quantitative questionnaire study examined psychosocial factors related to young adults’ sexual behaviour in Indonesia. It was anticipated that basic knowledge such as this would provide an important contribution for policy development with regard to young adult students’ sexual and reproductive health.

This study is reported in Chapter 7. The main research questions examined were:

1. What are the sexual experiences of Indonesian young adult university students in general?
2. How do young adult students perceive their peers’ sexual behaviours?
3. What are the predictors (ethnicity, religiosity, parental education, SES, perception of peers’ sexual behaviour, attendance of sex education, and perception of family happiness) of being sexually active?

4. How do young adult students perceive risks of pregnancy, STIs and HIV?

5. What are the experiences of condom use in young adult students?

6. How good is the knowledge about HIV transmission in this population?

**Study 3: Predicting Intention to Use a Condom**

There is currently very little information available regarding predictors of safe sex practices in unmarried heterosexual young adult university students in Indonesia. Using the TPB as a theoretical framework, this study examined this issue. To establish a comprehensive understanding of intention to use condoms in the Indonesia context, the TPB categories were used but with additional content specifically relevant to the Indonesian social context, as identified in Study 1.

Specifically, this study will examine general intention to use a condom, that is an intention that is independent of a specific event and measured some time before the actual behaviour occurs, which in this research is described as Prior Intention (Boldero et al., 1992; de Visser & Smith, 1999, 2001a, 2004). Prior Intention is expected to be predicted by the TPB variables, namely Attitudes to use a condom, Subjective Norm, and PBC. Attitudes to use a condom is defined as the individual’s positive or negative evaluation about performing condom use behaviour. Subjective Norm is defined as an individual’s perception of whether people important to the individual think that condom use behaviour should be performed, and PBC is defined as the perceived ease or difficulty of performing condom use behaviour. Moreover, a non-TPB variable, namely general attitudes towards condoms is defined as the degree of favourable attitudes towards condom itself. It is expected that the more favourable
attitudes about condoms, the more likely attitudes will directly influence the formation of prior intention.

Study 3 used quantitative questionnaire data collected at the same time as data for Study 2.

The main hypotheses examined in Study 3 were:

1. There will be differences in Prior Intention to use a condom between males and females and sexual behaviour status:
   a. Sexually inactive participants will have stronger Prior Intention than sexually active participants;
   b. Sexually inactive males will have stronger Prior Intention than sexually active males;
   c. Sexually inactive females will have stronger Prior Intention than sexually active females;
   d. Sexually active females will have stronger Prior Intention than sexually active males.

2. The attributes of Behavioural Belief, Normative Belief and Control Belief will vary between Intenders (participants who intend to use a condom) and Non-Intenders (participants who do not intend to use a condom).

3. The attributes of Behavioural Belief, Normative Belief and Control Belief will vary between gender and intenders status in sexually active participants.

4. Attitudes toward condom use, Subjective Norms, PBC, and Prior Intention to use a condom will vary in relation to gender, age, working status, ethnicity, parental education, economic status, sex education, and sexual behaviour status (i.e., sexually active and inactive):
a. Females will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than males;

b. Older participants will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than younger participants;

c. Participants who are in the workforce will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than those who are not in the workforce;

d. It is hypothesised that the Chinese Indonesian will have different Attitudes, Subjective Norms, PBC, and Prior Intention compared with Javanese participants;

e. Participants who have educated parents will be more likely to have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than participants who have lower educated parents;

f. Participants who come from higher SES will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who come from lower SES;

g. Participants who had received sex education will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who have never received sex education;

h. Participants who are sexually inactive will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who are sexually active.

5. Prior Intention to use a condom will be predicted by Attitudes, Subjective Norms, PBC in using a condom, perceived risk of HIV/STIs, perceived risk of
pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms.

**Study 4: Prediction of Actual Condom Use by Intention to Use a Condom**

According to the TPB, intention is the best predictor of behaviour (Ajzen & Fishbein, 1980). However, research has shown that intention is not always transformed into action (Fishbein, 2008; Pitts, 1998). Thus, it is important to investigate the factors that influence the direct link between intention and behaviour. An event specific intention to use a condom at the beginning of a particular sexual encounter is here described as Intention in Action. This study was prospective in design and a continuation of Study 3. The main purpose of Study 4 was to examine the relationship between Prior Intention to use a condom (i.e., intention to use a condom when assessed in Questionnaire 1 when participants were asked whether they intend to use condom in their next sexual encounter), and Intention in Action (i.e., an event-specific level to measure intention to use a condom at the beginning of the particular sexual encounter targeted, after participants filled out Questionnaire 1). Intention in Action is reported in Questionnaire 2 along with actual condom use behaviour. The influence of contextual factors in relation to condom use decisions was also examined.

The model of predictors of actual condom use to be tested is presented in Figure 7 (next page). In this model Prior Intention to use a condom will be predicted by Attitudes, Subjective Norms, PBC in using a condom, perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms. Intention in Action to use a condom will be predicted by Prior Intention, type of partner, communication with the partner and
condom availability. Actual condom use will be predicted by Intention in Action, level of sexual arousal, alcohol/drug use, and condom availability.

The primary hypothesis of Study 4 was that this model of predictors of actual condom use would be supported. Secondary exploratory analyses were also conducted. In particular, correlates of condom availability and communication with partner about condom use were explored and differences between male and female condom users and non-users examined.

Figure 7. From Prior Intention to Intention in Action to actual condom use – A hypothesised model

Study 4 was prospective in design and used the same participants as in Study 2 and Study 3 who provided additional information a month later. Details of this study have been presented in Chapter 9.

Chapter 10 summarises findings from the studies described and explores practical implications of the research in relation to possible public health initiatives. Strengths and limitations of the studies are discussed and possible future research directions considered.
Chapter 6
Study 1 : The Social Context of Sex and Safe Sex Among Indonesian Heterosexual Young Adults

As described in Chapter 4, theories of individual health behaviour such as the HBM or value-expectancy based theories such as the TRA and TPB have been criticised for not taking the social context into account in the theory (Brewer & Rimer, 2008). Most social constructionist theories, however, have pointed out that most sexual practices are actually the result of individual, social and cultural factors such as norms, rules, communication, relationship status, and not merely biological or individual factors (Baumeister & Tice, 2001; Kippax & Holt, 2009). In other words, “sexuality has different meanings for different people in different contexts” (Dixon-Mueller, 1993 in Coast, 2007).

Indonesia is culturally and ethnically diverse, and thus there are likely to be differences in beliefs and behaviours in relation to safe sex between ethnic groups. Recent research published by the UK Department for Education has confirmed that, in the UK, sexual practice differences do exist between different ethnic groups, with 87% of 18 years olds from White backgrounds being sexually active compared to just 31% and 30% from Pakistani and Bangladeshi backgrounds and 43% from Indian background (Department for Education, 2010). In Indonesia, there is the belief that, proportionately, Chinese Indonesian are major users of prostitution (Irwanto Irwanto, personal communication). A few research studies have also observed that Chinese Indonesian men were more likely to use condoms than native Indonesian men (Basuki et al., 2002; Gorman, 2008; Wolffers et al., 1999).

6 The author published the main findings of this research in Culture, Health and Sexuality (S. Simon & Paxton, 2004) as seen in Appendix A.
In the present study, ethnic differences in sexual attitudes and practices in Indonesia were explored. In particular, two ethnic groups were examined, Javanese and Chinese. These were chosen as representing the majority (Javanese) and the largest minority ethnic group (Chinese). About 45% of 224 million Indonesians are Javanese while Indonesia’s Chinese comprise just between 3 and 5% of the population\textsuperscript{7}. Although small in population, the Chinese community is regarded as the anchor of the country’s economy (Britannica, 2011). There are numerous social implications of this imbalance. Chinese Indonesians have greater access to health and education in Indonesia and many of them go to more expensive private universities. The Javanese on the other hand, mainly go to public universities or more affordable private universities.

In terms of condom use behaviour, Gorman (2008) noticed a difference between Chinese Indonesian and Javanese men. She studied young female sex workers in Surabaya and found that most of her participants reported that condom use preference was related to ethnicity of the clients. In particular, they noted that foreigners (bule) almost always wanted to use condoms, while Chinese Indonesian men want to use condoms most of the time. The Javanese on the other hand, almost never wanted to use condoms. One participant was quoted as saying: “Javanese [men] don’t want to use condoms and I feel forced to have sex without a condom... How will I eat tomorrow [if I say ‘no’]?” (Gorman, 2008, p. 1).

In terms of religion, which could influence sexual behaviour, the Javanese are more likely to be Muslim, while Chinese Indonesians are more likely to be Christian or Buddhist. Although there are variations and inconsistent findings, research has

\textsuperscript{7} There is no consensus on the number of Chinese Indonesian population. With the absence of surveys/censuses on ethnic composition in Indonesia between 1930 and 2000, various estimates on the number of ethnic Chinese in Indonesia had been made. For further discussion, see Ananta, Arifin & Bakhtiar (2008).
tended to document associations between religion and sexual behaviour (de Visser, Smith, Richters, & Rissel, 2007). For example, a study using cross-national data from over 30 developing countries around the world found that ever married Hindus and Muslims were less likely to report having had pre-marital sex than were ever married Jews and Christians. Married Muslims and Buddhists were also less likely than affiliates of all other religions to report extramarital sex (Adamczyk & Hayes, 2012). However, research has yet to explore potential differences in attitudes towards safe sex in different ethnic communities and religions in Indonesia. It is important to note however, identification of differences in sexual behaviour related to religious differences was not the driving force in the design of this research. As noted by de Visser et al. (2007), generally more specialized studies within representative samples of particular religious groups may be required to further understanding religious differentials in sexual behaviour.

In this research, it was anticipated that males and females would have differing attitudes, beliefs and practices due to the greater religious and social imperative for virginity, and the more immediate consequences of pregnancy, for females (Landor, Simons, Simons, Brody, & Gibbons, 2011). To explore ethnic and gender differences, this qualitative research employed focus group discussions as the method for data collection. A focus group approach, which relies on interaction within the group about topics that are supplied by the researcher, was selected as it provides a means of obtaining several perspectives about the same topic efficiently. Focus group methodology was chosen over an individual interview approach as a method for data collection in this study for two reasons. First, it was likely to be easier for participants to talk about the construction of sex and condom use in general in a small group of people known to each other rather than talking to a ‘stranger’ interviewer in
one to one interview. The second reason was related more pragmatic, as due to
constraint on time to spend in Indonesia, the focus group approach made it possible to
obtain different points of view efficiently. Participants of these focus groups were
selected to vary by gender and ethnic group. Same gender focus groups were used to
enhance confidence in speaking out on potentially sensitive issues.

This study employed thematic analysis as a method for identifying, analysing
and reporting patterns or themes within data collected (Braun & Clarke, 2006).
Thematic analysis is considered to be a foundational method for qualitative analysis
in which ‘thematizing meanings’ is identified as one of a few shared generic skills
across qualitative analysis (Braun & Clarke, 2006; Holloway & Todres, 2003).
Hence, some qualitative researchers have argued that thematic analysis is not a
specific method but rather is a tool to use across different methods (e.g., Boyatzis,
2009; Ryan & Bernard, 2000). Other researchers, however, believe that thematic
analysis is a specific approach in its own right (Braun & Clarke, 2006). Regardless of
this difference, qualitative researchers agree that one of the benefits of thematic
analysis is its flexibility, which can potentially provide a rich and detailed, yet
complex account of data (Braun & Clarke, 2006). Due to its flexibility, thematic
analysis is often used, but there is no clear consensus on the definition and practice of
thematic analysis (Boyatzis, 2009).

According to Braun and Clarke (2006), there are two approaches in qualitative
analytic methods. The first is research that stems from a particular theoretical or
epistemological position, such as conversation analysis, interpretative
phenomenological analysis, grounded theory, discourse analysis and narrative
analysis. The second approach is research that is essentially independent of theory
and epistemology and can be applied across a range of theoretical and epistemological
positions, and thematic analysis fall into this category. Braun and Clarke (2006)
further elaborated:

Although often (implicitly) framed as a realist/experiential method, thematic analysis is actually firmly in the second camp (i.e., second approach), and is compatible with both essentialist and constructionist paradigms within psychology. Through its theoretical freedom, thematic analysis provides a flexible and useful research tool, which can potentially provide a rich and detailed, yet complex, account of data. (p. 78)

Regardless of the epistemological chosen by the researcher, it is important that the epistemological and theoretical position of a thematic analysis is made clear since any theoretical framework carries with it a number of assumptions.

As research conducted in this study aimed to examine perceptions of attitudes and behaviours regarding sexual relationships and particularly condom use, this current research was based on constructivist epistemology. Constructivism examines the ways in which events, realities, meanings, and experiences are the effects of a range of discourses operating within society (Braun & Clarke, 2006). According to Feast and Melles (2010):

Constructivism (also) rejects the view that there is an objective truth waiting to be discovered. Rather truth and meaning is constructed out of the engagement of our minds with the world. The constructionist stance maintains that different people may construct meaning in different ways, even in relation to the same phenomenon, such as between those in different eras or cultures. (p. 4)

Thus, this research was not designed to search for a ‘singular, objective, empirically valid, universal truth, existing out there in the world’ waiting to be uncovered (Taylor
& Ussher, 2001). Similar to Taylor and Ussher (2001) in their research methodology, the study reported in this chapter did not set out to prove or disprove hypotheses or to test theory, rather it sought to generate phenomenological data from which an understanding might be developed. It was, however, based on a set of research questions to aid the understanding of the issues examined in this research (i.e., perceptions of sex, sex before marriage and safe sex). Hence, this research was deductive in its approach, from the perspective that to understand safe sex and condom use behaviour, it is assumed to be important to understand the social constructions of sex in general.

In summary, the main aim of this research was to explore male and female, and Javanese and Chinese Indonesian perceptions of attitudes and behaviours regarding sexual relationships and particularly condom use, in unmarried young adults in Indonesia, using a series of focus groups and thematic analysis. This information is needed to inform effective prevention interventions for STIs and HIV/AIDS.

As described in Chapter 5, the main research questions examined in unmarried heterosexual Indonesian young adults were:

1. How do young adult students perceive the meaning of sexual relationship?
2. How do young adult Javanese and Chinese Indonesian students perceive sex before marriage?
3. What influences the decision to have or not have sex?
4. What is the common type of first sexual partner?
5. How do young adults construct safe sex?
6. What is the variety of safe sex practices?
7. What are the determinants of safe sex practice?
Method

Participants.

Participants were 176 university students, aged 18-24 years, from ten different universities in Surabaya - 3 public universities, 1 Christian private university, 1 Catholic private university, and 5 general private universities. The students were mainly drawn from Humanities and Economics faculties. The reason for this was mainly pragmatic as the author knew or had access to lecturers in these fields. The universities covered a cross-section of SES (e.g., wealth distribution, parental education and occupation) (Welch, 2007) and were mainly attended by students from either Javanese or Chinese Indonesian background. There were 6 – 8 people in each focus group. In total, 25 focus groups were conducted: 8 male Javanese groups, 7 male Chinese Indonesian groups, 5 female Javanese groups and 5 groups of female Chinese Indonesians. Due to the sensitivity of the topics discussed, it was deemed culturally appropriate to have single sex and ethnic groups to facilitate more openness (Farooqi, Nagra, Edgar, & Khunti, 2000).

Participation was voluntary. The invitation to participate in this research was announced in selected classes, and because participants were recruited from a class, and hence they were classmates, most of them knew each other. It is important to note in this section research by Leask, Hawe, and Chapman (2001) who conducted a study that examined the effects of focus group composition, between constructed (i.e., where participants have not met before) and natural groups. They concluded “Discussions with constructed groups were animated, enthusiastic, expressed more divergent views and articulated greater complexities of the topic. Discussions with natural groups were generally flatter and less enthusiastic, displaying a higher level of apparent conformity to conventional wisdom” (p. 152). This finding was consistent
with other research such as that by Ekblad and Baarnhielm’s (2002) who suggested that participants should not know each other so that they will be more open and freely discuss issues.

However, Hennink (2010), whose research has been conducted in international settings, has also argued that recruiting a group of strangers is challenging in communities with tight social structure. Furthermore, she considered familiarity between participants may be beneficial in some cultural settings since familiarity can increase comfortability and thus participants will be more willing to contribute more to the discussion (Hennink, 2010). Taking these findings into account, it needs to be recognised that the natural groups used in this research may have resulted in greater uniformity in ideas expressed.

**Procedure.**

Ethics approval was gained from the University of Melbourne Human Ethics Committee prior to data collection (Appendix B). As mentioned above, participants were recruited from different university settings. Lecturers at ten different Surabaya universities, were contacted. The author then provided information that the focus groups to their students including the topic of research, that the choice to participate was entirely voluntarily, and that participants could withdraw from the research at any time without penalty. Next, students were informed by the lecturer that their participation would have no effect on their grade in the subject in which they were enrolled. This information was once more explained to participants at the beginning of each focus group session (See Appendix C). Students who were willing to participate provided their contact details and the author contacted them to organise attendance at a focus group.
Research was conducted in Bahasa Indonesia (Indonesian language). All participants were asked to sign informed consent at the beginning of the session (Appendix D). Each focus group was audio-taped and took approximately 90 minutes. All data were then transcribed and coded in Indonesian and then translated into English.

**Focus group procedure and questions.** In the focus groups, participants were encouraged to talk and were reminded that questions were related to their perceptions of attitudes and behaviours rather than their own experiences. The facilitator regularly checked whether participants who had not made a contribution would like to add anything to the discussion, and prior to moving on to the next topic (research questions) participants were once more time given the opportunity to voice their opinion “Perhaps there are any other opinions before we are moving on to next question?” (*Mungkin masih ada yang mau menyampaikan pendapat sebelum kita lanjutkan ke pertanyaan berikutnya?*).

As can be seen in Table 1 (next page), fifteen questions were used as guidelines in the focus group discussion. They fell broadly into two categories, those exploring beliefs about attitudes towards sexual relationships in general, and those more specifically related to safe sex and condom use among unmarried young adults. Participants were not asked directly about their own sexual behaviour, (e.g., whether they were sexually active/inactive), in order to facilitate participation and free flow of information during the focus group discussion. Rather, questions explored participants’ views in relation to unmarried young people’s knowledge, belief and attitude toward sexual behaviour and safe sex.
### Table 1

**Focus Group Questions**

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
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<tbody>
<tr>
<td>1.</td>
<td>What does ‘sexual relationship’ mean to you?</td>
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<tr>
<td>2.</td>
<td>What opinion do you think men/women of your age have about sex before marriage?</td>
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<tr>
<td>3.</td>
<td>How many men/women your age do you think have had sex?</td>
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<tr>
<td>4.</td>
<td>Why do you think young people engage in sexual intercourse or remain abstinent?</td>
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<tr>
<td>5.</td>
<td>Does religion play a part in decisions about sex before marriage?</td>
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<tr>
<td>6.</td>
<td>What type of person (e.g., boyfriend, CSW) is usually a person’s first sexual partner?</td>
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<tr>
<td>7.</td>
<td>What comes immediately to your mind if I say ‘safe sex’?</td>
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<tr>
<td>8.</td>
<td>Do you think that young people of your age are vulnerable to HIV/STIs? Why?</td>
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<tr>
<td>9.</td>
<td>What do you think are safe sex strategies of young people, including those for STIs?</td>
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<tr>
<td>10.</td>
<td>What attitudes do you think young people have towards condom?</td>
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<tr>
<td>11.</td>
<td>Do you think that people about the same age as you mostly use condoms if they have sex?</td>
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<tr>
<td>12.</td>
<td>In what situations do you think young people are most likely to use condoms?</td>
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<tr>
<td>13.</td>
<td>Why do you think they use or don’t use a condom?</td>
</tr>
<tr>
<td>14.</td>
<td>For those young people who use condoms when having sex, who do you think mostly suggests using a condom and provides it?</td>
</tr>
<tr>
<td>15.</td>
<td>Do you think young people use alcohol and/or drugs in their sexual activity?</td>
</tr>
</tbody>
</table>

**Response coding.** Participants’ responses to questions were analysed using thematic analysis. Responses were classified by ethnicity and gender on different topics including: the meaning of ‘sexual relationship’, opinions of sex before marriage, reasons for engaging in sex before marriage, reasons for abstinence, type of first sexual partner, meaning of ‘safe sex’, perceived risk of STI/HIV, safe sex strategies, factors that encourage or discourage condom use, suggestions of condom use and the condom provider, and the relationship between alcohol/drugs and sexual activity. Within each topic, themes and attitudes described were identified, recorded and verified by checking the response belonged to the theme. Themes were checked
for their patterns and as much as possible all different responses were identified and grouped for their commonalities by the author. There was no attempt to categorise according to a particular theory, but rather responses of participants to each topic were grouped and presented. For this reason, some the themes overlapped or were contradictory. The interpretation of these themes was conducted by a process of the author reading and re-reading responses, as well as reference to relevant literature and consultation with supervisor where there was uncertainty. Two independent coders were not used in this research which is a limitation of this research (Armstrong, Gosling, Weinman, & Marteau, 1997).

To ensure the validity, quality and credibility of response categorization by the author, all categorization was reviewed by the supervisor. Qualitative researchers have explored means to ensure validity of qualitative research (e.g., Hammersley, 2007; Mays & Pope, 2000; Tracy, 2010). Mays and Pope (2000) proposed a set of criteria for assessing the validity of qualitative research by firstly acknowledging that “There are no mechanical or ‘easy’ solutions to limit the likelihood that there will be errors in qualitative research” (p. 51). Their criteria included: (1) worth or relevance of the research, (2) triangulation (i.e., a method used by qualitative researchers to check and establish validity in their studies by analyzing a research question from multiple perspectives, for example using different sources of information or using several different investigators in the analysis process), (3) clear exposition of methods of data collection and analysis, and (4) reflexivity of the account (where reflexivity refers to the immediate, dynamic and continuing self-awareness of the researcher in relation to the process of research). To this end, the author ensured the direct relevance of focus group questions to the important goal of understanding safe sex attitudes and behaviours in the Indonesian context; followed up the qualitative study
with quantitative research to further explore the research questions; have described
the methods of data collection in detail; and thoughtfully coded and interpreted
findings being aware of the possibilities of personal bias.

**Results**

One of the purposes of focus group is to use the interaction between a group of
interviewees to generate a discussion about a topic and to reveal differences in beliefs
and attitudes by means of creating a group dynamic (David & Sutton, 2011). The
dynamic most frequently observed in these focus groups was a flow of conversation
in which few contradictory views expressed between participants but rather there was
a flow of discussion with one participant adding to the views of the previous one.
Thus, participants did bounce off each other, but instead of disagreeing with
someone’s opinion, a participant was more likely to continue in a similar direction by
saying, “I also heard that….” or “in my case….” or “I have a friend that….”. Thus,
instead of disagreeing with someone’s opinion, participants tend to present other
facts.

**The Meaning of a “Sexual Relationship”**

Initially in the focus groups, the meaning of a “sexual relationship” was
explored to provide a context for the following discussion. Many participants gave
the meaning of a sexual relationship as sexual intercourse, and most participants
described a sexual relationship as a purely physical relationship as opposed to an
emotional, love relationship between two persons. However, when participants were
asked about their ideal sexual relationship, most quickly added that it should not be

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In English, there are two terms that are often used interchangeably but distinct concept: having sex and making love (E. D. Cohen, 2013). In Indonesia, “hubungan seks” or “berhubungan seks” (meaning: sexual relationship) are used to describe both having sex and making love. However, it is possible that to most participants, the word ‘relationship’ in this context may connote more into the act of physical relations. Thus, perhaps a more appropriate question that should have been used in this study is “What is the meaning of sex (seks in Bahasa Indonesia) to you?”.
for sexual pleasure only but should be an expression of love, which ideally happens in
a more serious, responsible, marriage relationship.

“An intimate physical relationship between two people to get pleasurable feelings and
for having children”. (Javanese female)

“Opportunity to excite the love and passion wholeheartedly”. (Chinese female)

**Sex before marriage**

The majority of participants perceived sexual relationships as something
sacred that should occur in a binding marriage. Despite this, many female and male
participants also perceived sex before marriage as something natural, more acceptable
now than previously, and no longer taboo within the younger peer group, although
still socially frowned upon. A number of males particularly expressed the view that
sexual relationships before marriage were acceptable as long as there was love and
they were responsible. Responsible was defined in two different ways, one was sex
without penetration and the other was willingness to marry should the female partner
become pregnant. Within the focus groups there was a very widespread belief that
friends of participants engaged in sexual relationships. Female group participants
believed that between 20 and 60% of their friends were sexually active; and male
group participants believed that between 20 and 80% of their friends were sexually
active. This finding can be interpreted as suggesting the presence of a belief that pre-
marital sex is relatively common among young adults, especially within males,
regardless of whether young people were actually sexually active or not. It is not
known whether participants were projecting their own behaviour onto their peers or
whether, once they became sexually active, they tend to associate with others whom
they perceive to be sexually active (Farahani, Cleland, & Mehryar, 2009).
“For most young people now, it seems that a relationship is tasteless without sex”.

(Chinese female)

“Many say it’s unacceptable, but actually they do it, and I think although 90% of society might say that it’s unacceptable, but for adolescents, it’s just okay. You know why? Because it’s normal! It’s forbidden, but in fact it’s very hard to prevent”.

(Chinese female)

“Sex before marriage is never about love. It’s different if you do it after marriage. You do it because you love each other”. (Chinese male)

“I agree with sex before marriage but it must be with responsibility and within certain boundaries”. (Javanese male)

“Sex before marriage is acceptable as long as it is within normal boundaries and you are aware of the risks”. (Chinese male)

“It’s OK if the couple really love each other and are prepared to be responsible for what they are doing”. (Chinese male)

“Responsible means - don’t put it inside, just kissing and may be petting. Don’t make her lose her virginity”. (Javanese male)

“Responsible also means, that the boy will admit that he is the father of the child and be ready to marry her”. (Javanese female)

There were opinions regarding the acceptability of sex before marriage and its association with modernisation. A number of participants said that it is understandable that young people are becoming more permissive regarding sex before marriage because they see this behaviour as part of modern life style. In addition, for some male participants, engaging in sex before marriage appeared to be a matter of pride. Despite this, the same men frequently believed it was unacceptable for females
to have sex before marriage and indicated a woman’s virginity was still important to
them.

“We are more permissive now. It’s sacred, but because of the advancement of
communication technology and since you can find pornographic videos everywhere, it
has become very normal for young people to engage in sexual relationships. Also,
because of modernisation, many of us think that virginity is not very important any
more”. (Javanese female)

“Young people should not do it, especially women, because people will think that they
are cheap and their future husband will know that they are no longer a virgin”.
(Chinese male)

“If a man does it, it’s just okay. But if girls do it, they will be branded as cheap. You
know, there is a saying, a man makes a stain and the woman get stained”. (Javanese
male)

“Many of my friends think that you will look cool if you are sexually active. It’s kind
of a trend and it means that you aren’t an out-of-date adolescent”. (Javanese male)

“For the girls, we can’t admit that we have ever had sex because many boys will think
that we are cheap. But I think many girls feel that being sexually active is a
consequence if you want to be a modern girl, just like on the TV”. (Javanese female)

In summary, there were diverse of opinions regarding the appropriateness of
sex before marriage, with views not apparently associated with either ethnic group or
gender. Many viewed sex before marriage as frequently occurring, though not a
socially sanctioned part of the modern lifestyle. Males especially were frequently
accepting of sex before marriage in males and even had the confidence to let others
know but not in females, for whom they viewed virginity as important.


Reasons for Engaging in Sex Before Marriage

Sexual desire and curiosity were the most common reasons given for participants to engage in sex before marriage. This curiosity was reported to arise from different sources ranging from the influence of movies and peers, through to the quiet situations that motivate couples to begin sexual activity, “but somehow you will be carried away and want to try… what it feels to touch or being touched” as one participant put it.

“Because they’re anxious to know and with motivation from friends, they finally want to try it”. (Chinese male)

“Maybe because of the influence of pornographic videos. After watching these videos, they just can’t contain their lust”. (Javanese male)

“Girls, we can hold our sexual desire, but boys, they can’t. Especially after watching blue movies and they start to fantasize. The next step, they are ready for release. If they have money, they buy sex from a sex worker, but if they don’t have money, then his partner becomes his target”. (Javanese female)

“Don’t go courting in quiet place because the devil is 100 times more powerful to tempt you. It may look romantic but somehow you will be carried away and want to try… what it feels to touch or being touched”. (Chinese female)

Compared to male Javanese, Chinese Indonesian males reported feeling more pressure from their friends to engage in sexual activity. Events were described in which Chinese males would go together outside the town to a recreational area with many brothels. One or two commercial sex workers would be hired and every person would have their turn.

“If they know that you’re still virgin, they try to influence you and they even will take you with them to a prostitute. Some of them even pay for you”. (Chinese male)
“I heard a story, they went to Tretes\(^9\) with around six people. They rented a villa, and then two of them were sent to pick up a girl. That girl was in one of the rooms and each had their turn, hahaha… The girl stayed until morning”. (Chinese male)

Love is also one of the reasons for sex but this was mainly suggested by female participants. Many female participants believed that sex strengthened a relationship, although they also suggested that sometimes girls engage in sex before marriage because they worried that their boyfriend would break off the relationship if they refused to do so. However, there was also the suggestion that love was only a rationalisation for their act.

“They want to show their love to their partners, even if they must prove it with losing their virginity”. (Javanese female –group 1)

“It’s all rubbish. Man and woman have sex because they are too horny. Love is just their justification”. (Javanese female –group 2)

For other participants, in particular males, having sexual relationships were nothing more than a life style. They took it for granted because many of their peers were having sexual relationships and they felt they needed sexual satisfaction.

**Reasons for Abstinence.**

There were no apparent differences between groups regarding reasons for abstinence. Most participants who expressed beliefs in the importance of abstinence believed that they were still bound by religion, although it can be interpreted that, rather than religion per se, it will be the consciousness of religious teachings that will discourage pre-marital sex. Social norms and afraid of the risks associated with sex before marriage such as losing virginity and pregnancy were also cited as reasons for abstinence. In addition, many participants suggested that to have sex before marriage

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\(^9\) Tretes is a mountainous resort in East Java, about 1.5 hours by car from Surabaya
was a rebellious act and that having good communication with parents and strong family ties was associated with abstinence. Many participants believed that their future would be adversely affected by being sexually active. However, among male groups, there was also some scepticism about reasons for abstinence in females.

“It’s just not the time. We are still students”. (Javanese female)

“We are afraid of sin”. (Chinese female)

“We are not ready yet”. (Chinese male)

“We are afraid of the consequences. The pleasure is just for a couple of minutes but the sorrow would be forever”. (Javanese male)

“Religion has great influence. Usually people who do have sexual relationships are not religious, even though they do sholat (Moslem prayer)”. (Javanese female)

“Of course religion plays a big role but it may be people just don’t give a thought about it”. (Chinese male)

“All religions are good and teach us good thing, like don’t do sex yet, but if we don’t listen to the teachings, then it has no impact on young people”. (Chinese male)

“They (women) are just waiting for the opportunity”. (Chinese male)

“May be because they (women) just don’t have partner!”. (Javanese male)

**Type of First Sexual Partner**

Almost all participants agreed that women usually have their first sexual encounter with their boyfriend while for men, the first sexual encounter was usually believed to be either with a girlfriend or sometimes with a female commercial sex worker. Male Javanese reported the first partner usually to be a girlfriend. In male Chinese Indonesian focus groups, participants believed the first partner of many Chinese men was a commercial sex worker.
“Because young Chinese usually know about sex earlier than Javanese, and are mostly rich, they have videos and money to pay prostitutes”. (Chinese male)

“Usually the first sex partner is a girlfriend or maybe a sex worker if they are rich”. (Javanese male)

“I guess mostly with their boyfriends”. (Chinese female)

“Most probably with their boyfriends, because girls want to do it mostly because they love their boyfriend”. (Javanese female)

**Meaning of Safe Sex and Perceived Risk of STI/HIV**

“Safe sex” was mainly understood as meaning the avoidance of pregnancy, both for males and females from different ethnic backgrounds. In Indonesia, becoming pregnant almost invariably means getting married, even if divorce follows thereafter (Rowe, 2009; I. D. Utomo et al., 2012). Unwanted pregnancy has therefore immediate and generally negative social consequences. Thus, safe sex, for female participants exclusively, was also viewed as a sexual relationship within marriage.

“HIV or STI isn’t threatening, pregnancy is!”. (Chinese female)

“Safe sex means no pregnancy”. (Javanese male)

“Safe sex is a sexual relationship after you are married, that’s it”. (Chinese female)

While the risk of pregnancy was viewed as high, the risk of acquiring HIV/AIDS was regarded as very low. The risk of acquiring an STI was also regarded as low, and, in addition, the consequences of an STI were seen to be relatively insignificant. Further, while participants suggested that young people may be at some risk of acquiring an STI, they personally did not believe that they would be infected as they were young, and did not have many partners. In addition, a view expressed exclusively in male groups, was the belief that they could differentiate between a
‘clean’ and ‘dirty’ partner. They also believed that the prevalence of STI/HIV was very low in Indonesia.

“I think it’s different in Western countries. Here, there are not many people who have HIV/AIDS. If you get “influenced” (infected by an STI), all you have to do is just go to the doctor, that’s it”. (Javanese male)

“Indonesia is different from Western countries. Here we don’t change partners too often. We don’t have many partners”. (Javanese male)

“You can see from her body whether she is too thin or not. Look into her eyes and see whether they are red or not, and also when she talks, if she is sick you can tell from her breath”. (Chinese male)

Safe Sex Strategies

Since safe sex was viewed mostly in terms of prevention of pregnancy, most participants suggested unmarried young people engaged in non-intercourse sexual activity, although condom use was also mentioned quite often as one of the strategies used. Many participants said that non-intercourse sexual relationships, ranging from masturbation, kissing, necking, petting to oral sex are much more common in unmarried young people’s sexual behaviour. They argued that in these kinds of behaviours, they could still obtain sexual pleasure while minimising the risks associated with pregnancy and losing female virginity.

“You can do everything, except intercourse”. (Javanese female)

“It’s much better and safer for us if we just do ‘passport size photo’ [anything from waist up] or petting if you have to”. (Chinese female)

“Oral sex, it’s a trend now”. (Javanese male)

A number of other strategies were believed to prevent acquiring any STI/HIV. These included: not having a sexual encounter when not physically fit, choosing a
clean partner, and taking antibiotics before and after sexual intercourse with a female commercial sex worker.

“If you feel tired, you shouldn’t do it because you can easily get the virus”. (Chinese male)

“They said that every time after you do it with a prostitute you have to drink two Super Tetra (an antibiotic brand)”. (Javanese male)

“I have a friend who sometimes has casual sex. When I asked her ‘Aren’t you afraid of sex diseases?’ she replied, ‘I pick them up (men), they don’t pick me up. I choose only the good guys. They are very nice and I don’t think they sleep around’. That’s what she said”. (Javanese female)

“My friend says, ‘If you get the ‘flu’ (STI), if you go to a commercial sex worker and they give you oral sex, then you will be cured’. I don’t know if it’s true”. (Chinese male)

Factors that Encourage or Discourage Condom Use

The situation was described as playing an important role in determining condom use. It was generally agreed that young people do not regularly use condoms and seldom during their first sexual intercourse.

“It’s important to look inexperienced in front of your girlfriend, otherwise she may refuse it. If you use a condom, your girlfriend will think you are an expert already. You’ve done it before”. (Javanese male)

“If you go to a prostitute for the first time, you really want to feel it without a condom. You want to feel the real sex!”. (Chinese male)

If a sexual encounter is not planned then most likely a condom will not be used as it is more likely that a condom will not be available. However, condoms were
widely used for pregnancy prevention and were favoured over other contraceptive methods, although many women also practised a calendar system of contraception.

“Condoms are safer than other methods, because young women usually don’t know how to get or use pills. Besides, using pills just makes you appear like an old lady because their Mums usually use pills”. (Javanese female)

It was also believed that type of partner played a part in whether a condom was used or not, but there was not a very consistent pattern of use in relation to partner type. For example, sometimes a condom would be used with a girlfriend to protect her, but sometimes not as a way of indicating commitment to each other. Similarly with a commercial sex worker, some men would use a condom to protect themselves, but sometimes not in order to maximise pleasure.

“If you play with your girlfriend, then you must use a condom. But if you do it with the sex worker, certainly not, because there is no responsibility and because you pay a sex worker to get pleasure. Why do you have to use condom?”. (Javanese male)

“With girlfriend, they won’t use a condom, instead they may drink sexual tonics (to have stronger or longer sex), but with a prostitute they will use a condom to protect themselves”. (Chinese male)

“If women have intercourse with their boyfriend, I guess they don’t use a condom because they want to show their love to each other”. (Chinese female)

Many participants also suggested that condom use was viewed unfavourably since it is perceived as reducing sexual pleasure.

“Certainly I wouldn’t use a condom, it’s not enjoyable”. (Javanese male)

“Condoms aren’t good but they can help you to delay ejaculation”. (Chinese male)

“My friends said that using a condom makes it less pleasurable”. (Javanese female)
**Suggestion of Condom Use and Condom Provider**

Buying condoms in Indonesia is often considered an embarrassing experience for youth (Purdy, 2006) and most participants agreed that it was the man who usually provided condoms since it is considered easier for a man to deal with the embarrassment and a man would be less socially sanctioned when buying condoms at street kiosks, pharmacies or supermarkets. However, the suggestion to use a condom may be made by either men or women with pregnancy as the main issue. Data collected suggested that men were mentioned as condom provider more often than women, both in Javanese and Chinese groups. As can be seen from the quotations below, there were some contradictions in reasons given regarding about who should provide condoms. Despite differences, the theme of the reasons was centred on pregnancy and trust issue.

“*It must be women, because they don’t want to be pregnant*”. *(Chinese male)*

“*Men, because men usually worry more if their girlfriend becomes pregnant*”. *(Javanese male)*

“*Men, because they don’t want to be responsible. Many of them just want to have fun*”. *(Javanese female)*

“If the woman suggests it, then the women would be doubted. How can she suggest it? She must have had sex before”. *(Chinese male)*

“If with a sex worker, usually they suggest it. They usually provide them for free but sometimes you have to pay”. *(Chinese male)*

**The Relationship Between Alcohol/Drugs and Sexual Activity**

Across participants, there were consistent reports that drugs, particularly amphetamines, were being used as sexual stimulants and tonics. In addition, in Chinese male groups, several participants said that many young women who were
addicted to illicit drugs would give sexual services in exchange for money to buy drugs.

“They can increase your sexual desire and make you stronger”. (Javanese male)

“They can make you wilder and you will have much better sex”. (Chinese male)

“They make the man stronger and so he can satisfy his partner, not only one, but many times”. (Javanese female)

“Maybe the man gives it to the woman so the woman will have more sexual desire”. (Chinese female)

Discussion

This research aimed to explore issues related to safe sex behaviour, and condom use specifically, in unmarried young adults in Indonesia. To date the majority of research into safe sex practices has used Western samples and the findings are unlikely to be generalisable to other societies and cultures. The need for a good understanding of safe sex attitudes and behaviours in Indonesia is indicated by evidence that STIs are prevalent in Indonesia and that HIV/AIDS is becoming an increasing problem especially in specific areas of Indonesia. This research provides information about beliefs regarding current attitudes towards sex and condoms in unmarried young adults in Surabaya that will be valuable in guiding preventive programmes within Indonesia.

In the initial part of the focus groups, a picture was gained of general attitudes towards sex and in particular sex before marriage. In this sample, a distinction was often made between a sexual relationship before marriage and one within a marriage. In the former, sex for pleasure was often regarded as especially important, while sex as the expression of love was regarded as more important within a marriage.
Further analysis of qualitative data revealed beliefs and attitudes about sex before marriage that are consistent with the present time being one of shifting values and behaviours, in which sex before marriage is becoming accepted as a reality among young adults. It is important to note that the acceptance of pre-marital sex is generally low in Indonesia, including by young people (Badan Pusat Statistik & Macro International, 2008b). Sex before marriage and extra-marital sexual intercourse is considered *zina*, which is a major sin in Islam and also Christianity. Some more conservative Muslims, including adolescents and young adults, view any form of physical contacts outside marriage such as kissing and holding hands as ‘approaching’ *zina* (Parker & Nilan, 2013). Parker (2008) argued that assumptions of adolescents elsewhere doing sexual experimentation and exercising freedom may not be applicable to Indonesian adolescents and that ‘something different happens’ in Indonesia. Nonetheless, at least in some circles, and in particular in large cities, there is a trend toward more liberal attitudes and behaviours (Bennett, 2007; Parker & Bennett, 2008). I. D. Utomo and Utomo (2013) reiterated I. D. Utomo and McDonald’s (2009) argument that more young people are now sexually active before marriage.

A number of observations in this study support this view. Sexual activity before marriage, if not necessarily intercourse, was widely, though by no means universally, regarded as quite common. While not specifically endorsing sex before marriage for themselves, many young participants believed their peers were sexually active. As perceptions of social norms tend to influence personal decision-making (Ajzen, 1991), this belief may contribute to young people making personal choices to engage in sex before marriage. Importantly, there was also wide acceptance of non-intercourse sexual behaviour in which it appeared that participants did not oppose
intercourse relationships per se, but rather chose non-intercourse to avoid the risks of pregnancy and loss of female virginity.

Also consistent with a view of changing standards in regard to sex before marriage, participants indicated that they believed sex before was marriage was viewed as unacceptable by older members of society. Some participants also associated sex before marriage with the modernisation of Indonesia and with being ‘modern’. Such modernisation is associated with westernisation by Indonesian authorities and religious leaders, who consider sex before marriage and ‘free sex’ as products of Western cultures. Espin (in Blake, 2008) reported a similar situation in Latin America in which many Latino parents view being promiscuous as becoming Americanised. The television programmes that mainly come from Western countries, often with sexual scenes, are perceived by young people as a confirmation of a general belief that to become a modern young adult, one has to be sexually active. If liberal attitudes and beliefs such as these are held, an actual increase in related behaviours is likely and safe sex interventions in urban Indonesia need to be guided by this reality.

Sexual desire and curiosity were the most common reasons given by participants as to why young people engage in sex before marriage. The most recent Adolescent Reproductive Health nation-wide survey (Statistics Indonesia et al., 2013) confirmed that curiosity was the main reason (54%) for unmarried young people to have sex. With this reality in mind, adequate sexual education is required to ensure that young people know how to appropriately protect themselves against both pregnancy and STIs, as restricting sexual information is not likely to restrict sexual activity. However, as indicated above, sex before marriage was not endorsed by all young people and many gave reasons for remaining sexually abstinent. Men and
women shared many views in this regard with loss of female virginity and fear of pregnancy being major reasons. In a society in which sex is traditionally only permissible within marriage, fear of pregnancy is predictable. Losing virginity and more importantly becoming pregnant before marriage, is considered as a source of deep shame and damaging to family honour (Alters & Schiff, 2009; Smith-Hefner, 2006). This is comparable with attitudes in Catholic Latino families (Raffaelli & Ontai, 2010) and in other Muslim countries where women are judged by their sexual conduct (Bauer, 1985; Masquelier, 2008). In Indonesia, if an unmarried woman becomes pregnant, a couple would be expected to marry under almost all circumstances as marriage is seen as the only way to preserve family honour (Jones, 2010; I. D. Utomo et al., 2012). This will certainly place pressure on both the man and woman to avoid pregnancy unless marriage is an acceptable outcome.

Religious factors were also found to be very important determinants in decisions to remain sexually inactive. Many studies have examined the influence of religion and religiosity on sexual attitudes and behaviour (e.g., frequency of prayers, attendance at services). In general, religiosity has been found to be a protective buffer against sexual risk taking, including delayed onset of sexual activity, and a more narrow range of sexual experiences (de Visser et al., 2007; Walsh, Fielder, Carey, & Carey, 2013). However, research on relationships between religiosity and safe sex practices tends to be inconsistent, with some studies finding a positive association between the two, some finding a negative association, and some finding no association (Walsh et al., 2013). Indeed, de Visser et al. (2007) highlighted the importance of considering not only religion or religiosity, but the intersection between these two variables, suggesting that “A focus on either religion or religiosity will give an incomplete understanding of the relationship between religion and sexual attitudes
and behavior” (p. 42). However, this interaction between type of religious beliefs and the degree of religiosity and its association on sexual behaviour was not examined in this research. Furthermore, although religion and religiosity are important, research in the United States has shown that over time, many young people appeared to be becoming less committed to upholding religious and moral teachings (Das, Eargle, & Butts, 2011). Studies of sexual behaviour in other religious countries, for instance in Morocco, also show a similar situation in which young Moroccans are changing their attitudes towards pre-marital sexual activity (Obermeyer, 2000). In Indonesia, Situmorang (2003b, p. 51) observed “a weakening of ethnic-religious moral control over young people’s sexual behaviour” (for a further discussion on the Islamic revival in Indonesia and its impact on Indonesian youth, see Chapter 10).

A number of differences were observed between men and women and different ethnic groups in perceived attitudes and beliefs about pre-marital sex. In this sample, participants believed that a woman’s sexual partner was likely to be her boyfriend while men tended also to have sexual encounters with sex workers. Women, to a greater extent than men, used love as the justification for a sexual relationship. This justification may enable a young woman to feel better about herself since this may facilitate differentiation between herself and a perek (‘experimental girl’).

Javanese and Chinese Indonesian ethnic groups shared many common beliefs and practices. However, there was a strong belief that the Chinese were more likely to use sex workers than their male Javanese counterparts. This may be in part due to financial circumstances. Among the Chinese male group, there was a belief that Javanese girls were more likely to say yes if asked to engage in casual sex. Compared to Javanese men, Chinese men also reported feeling more pressure from their peers to
engage in sex. While further research is required, these findings indicate that sexual education programmes need to take into account sub-cultural differences with Indonesia.

Within the cultural context of pregnancy outside wedlock almost invariably requiring marriage, ‘safe sex’ was primarily regarded as preventing pregnancy rather than STIs. While condoms when used to avoid pregnancy could be helpful in avoiding STIs, they may not be used consistently and alternative contraceptive methods, ineffective in STI prevention, may also be used (I. D. Utomo & Utomo, 2013). In addition, the risk of acquiring an STI was regarded as low, a view that most likely reinforced by government underestimation of prevalence. As suggested by Castaneda, Brindis, and Camey (2001), if the community does not recognise the risk, it is not likely that individual members will do so.

Our focus group data indicated that many young Indonesians have poor knowledge about STIs and preventive strategies. Many men especially held beliefs that could be described as ‘magical thinking’ such as oral sex with a sex worker can cure an STI. This kind of magical thinking has also been reported to be widespread amongst sex workers in Indonesia. Wolffers et al. (1999) and Basuki et al. (2002) reported that it is common practice for a sex worker to look at her client’s appearance, check his odour and inspect his sexual organs. Many sex workers also believe that washing with soap or toothpaste after unprotected sex prevents STIs. These findings suggest that STI prevention programmes need to provide extensive and reliable information to avoid misperceptions and to increase relevant knowledge. Indeed, our research suggests that in some aspects Indonesian young people have similar sexual attitudes as in Western countries, such as links between safe sex and pregnancy, communication of trust and social stigma (de Visser & Smith, 2001b; Flood, 2000;
Hillier, Harrison, & Warr, 1998; Kirkman et al., 1998). However, there are also differences between Indonesian and Western cultures and these are especially notable in respect to knowledge relevant to STI prevention.

Participants in focus groups identified situations and beliefs that encouraged and discouraged condom use, although there were considerable inconsistencies. For example, both using and not using a condom were described as a means of expressing love for a boyfriend or girlfriend. Using a condom was seen as being responsible because of the willingness to prevent pregnancy and to a lesser extent to prevent STIs in exchange for sexual pleasure which was perceived as an expression of love. Not using a condom, however, was also perceived by some—mostly women—as an expression of love because although there was a risk of pregnancy and STIs, there was still willingness to please their partner sexually. Of particular concern was the view that both using and not using a condom was regarded as appropriate when having sex with a sex worker. Sex with commercial sex workers at high risk of STIs, and negative attitudes about condom use in this situation, is a particularly risky combination in relation to acquisition of STIs. Observation of this combination is also consistent with previous research (Basuki et al., 2002; Carael, 1995; Mustikawati et al., 2009; B. Utomo et al., 1998). However, our data indicate that the negative attitudes are not consistently held. This may reflect relatively unstable attitudes regarding condoms and in such an environment a well-constructed prevention intervention could have a particularly valuable impact.

In relation to the gender politics of condom use among young Indonesian adults, research in Indonesia has documented that men were reported to have greater power than women (I. D. Utomo et al., 2009). A number of women participants suggested that many unmarried young women engage in a sexual relationship because
they are worried that their boyfriend would break off their relationship if they refuse to do so. This suggests that many young women may feel they have little power over their sexual decision-making. Power differences can also be seen in the buying of condoms in which even though an unmarried young woman may suggest condom use, it is only acceptable for men to buy them. To a large extent, this situation makes women dependent on men in relation to condom use. As suggested by Castaneda et al. (2001) in the Mexican context, HIV/AIDS campaigns may endeavour to empower individuals, but they will not be effective if they ignore wider social norms, expectations and controls. This issue particularly needs to be considered in relation to availability of condoms to women in Indonesia. In the Australian context, it has been pointed out that when power differentials exist between men and women in sexual relationships, encouraging women to be more assertive about condom use is unlikely to be effective (Waldby et al., 1993). Similarly, in the United States, because women are often the less powerful partners, it follows that women would be less likely to participate in decisions about condom use (Woolf & Maisto, 2008). Therefore it is clear that one of the foci of interventions should be directed towards changing male attitudes. Other interventions such as improving access to condoms for young people and increasing women’s ability to negotiate condom use must also be targeted.

A number of limitations of this research need to be considered. While the researcher endeavoured to gain information from a wide range of participants in non-threatening conditions, it is likely that the sample was biased towards those who were not particularly inhibited about discussing these matters. It is therefore unclear how generalisable the findings are to all young adult Indonesians. In addition, there are many ethnic minorities in Indonesia who were not targeted in this study and consequently it is not clear the extent to which these finding may be generalised to
other ethnic groups. It is also important to highlight that the sample may not have been entirely representative as it was drawn from particular areas of study (i.e., Humanities and Economics), and participants in these fields might hold somewhat different views than students in other fields.

A further limitation is that while focus groups facilitate identification of the range of beliefs existing on a topic, the actual proportions of the sample holding specific views is not known. Quantitative research is required to gain this information. In addition, two independent coders were not used in this research. Finally, the questions asked were specifically about perceptions of behaviours within their peer group rather than one’s own behaviours in order to facilitate discussion. However, at this stage, it is not clear the extent to which perceptions reflect on extent of actual behaviour and this will be explore in Study 2.

Another limitation is the possibility of bias in coding and interpretation of focus group responses. A number of authors have pointed out the need for reflexivity in qualitative research to ensure the quality of conclusions (Kelly, 1999; Shaw, 2010). Reflexivity involves some idea of thinking, or ‘reflective thought’, and some notion of ‘constitutive of the self’ (Kelly, 1999). The basis of qualitative research lies in the interpretive approach to social reality and hence it is subject to the biases, values, and judgments of researchers, who consequently need to be aware of and to explicitly acknowledged their biases so they are taken into account in data presentation (Creswell, 1994).

In the present study, a formal reflexivity journal was not kept which is a limitation of the study. However, the author did have a particular bias in conducting the research which needs to be taken into account. The driving force of the author to conduct this study and a PhD in this field was to obtain data to provide to Indonesian
policy makers, leaders, institutions and the public in general to demonstrate that risky sexual attitudes and behaviours have become more prevalent among Indonesian young people and that denying this a reality is not beneficial in the long run. In quest of searching for evidence, it is quite likely that biases of the author seep into this research. It is also worthy of mentioned that this qualitative study was conducted at the beginning of a bigger research and an important goal was to provide contextualisation and background information for the following research seeking to understand safe sex behaviour and especially condom use behaviour in young adults within the Indonesian context.

**Conclusion**

In conclusion, this research highlights the need for STI/HIV prevention interventions in young adult Indonesians that take into account changing social attitudes and behaviours regarding sex that are likely to result in an increase in sexual activity before marriage. While condoms may be used to prevent pregnancy, they are not reported to be widely used for disease prevention. In addition, erroneous beliefs about STIs, their prevention and cure, appear widespread. While in Indonesia STIs and HIV/AIDS are not as prevalent as in many parts of the world, changing attitudes and behaviours are likely to increase the risk over coming years if effective campaigns are not put in place. There would be no better time than now to introduce interventions that take into account the reality of the changing social environment of young adults in Indonesia.
Chapter 7
Study 2: Psychosocial Factors Associated with Sexual Practices and Safe Sex

Research in Western and African Countries has already demonstrated the association between psychosocial factors (such as SES, religiosity, peer attitudes) and the initiation of sexual activity and safe sex practices (e.g., DiClemente et al., 2008; Rani et al., 2003; Rosengard et al., 2005; see Chapter 3 for a review). However, as demonstrated in Chapter 3, there has been no examination of whether similar or different psychosocial factors are associated with sexual behaviour of Indonesian heterosexual young adults. As described previously, in light of the different social environment in Indonesia compared to other countries, similarity cannot be assumed (Wellings et al., 2006). In addition, within Indonesia, many public comments about sexual practices are made, for example by political and religious leaders, that are based on speculative and anecdotal data (e.g., sex education is promoting promiscuous behaviour) (Handajani, 2008; Parker & Nilan, 2013; Radio Australia, 2010). Consequently, the aim of Study 2 in this thesis was to build on the qualitative data described in Study 1 and to extend understanding of the sexual behaviour and beliefs, especially related to condom use, of young unmarried heterosexual adult university students in Indonesia.

It is especially important to gain this understanding in Indonesia since available data are very limited. In the recent Global Report on AIDS (UNAIDS, 2010), many sexual behaviour indicators for Indonesia were still left blank, such as “Young women and men aged 15-24 who correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions”, “Percentage of young women and men aged 15-24 who have had sexual intercourse before the age of 15”, and “Percentage of women and men aged 15-49 who have had sexual intercourse
with more than one partner in the last 12 months”. Basic knowledge such as this would be valuable for guiding policy development with regard to young adult sexual and reproductive health and therefore gaining information of this kind was part of this study. For this research, young adult or young people referred to men and women aged 18-23 years old.

This study attempted to answer the following research questions:

1. What are the sexual experiences of Indonesian young adult university students in general?
2. How do young adult students perceive their peers’ sexual behaviours?
3. What are the predictors (ethnicity, religiosity, parental education, SES, perception of peers’ sexual behaviour, attendance of sex education, and perception of family happiness) of being sexually active?
4. How do young adult students perceive risks of pregnancy, STIs and HIV?
5. What are the experiences of condom use in young adult students?
6. How good is the knowledge about HIV transmission in this population?

**Method**

Study 2 (the current descriptive study) and Study 3 (Predicting intention to use a condom, described in the following chapter) used the same data set and therefore the methods described apply to both studies. There were two questionnaires (Questionnaire 1 and Questionnaire 2) that were completed at two different times (Time 1 and Time 2), but questions used in this study and in Study 3 (which is reported in Chapter 8) were only contained in Questionnaire 1. Questionnaire 2 contained questions for Study 4, which will be described in Chapter 9. Procedural differences between the studies will be further elaborated in Chapter 9.
Participants

All participants were university students who were enrolled in one of eight universities and who consented to participate in this research. These universities are all located in Surabaya and were deliberately selected to enable wide demographic and SES differences to be captured.

In total, 1178 questionnaires were distributed to the students and 1039 were returned to the researcher (response rate of 88.20%). The majority of participants were heterosexual (98.15%). Less than 1% of female participants and about 1% of male participants reported being attracted to the same sex. An initial screening revealed that 147 questionnaires could not be used for analysis due to severely incomplete answers or due to participants being married, more than 23 years old or non-heterosexual. This initial screening resulted in 892 questionnaires (valid response rate of 75.72%) that were eligible to be analysed. Of these 892 participants, 360 (40.4%) were male and 532 (59.6%) were female. Their ages ranged from 18 to 23 years ($M = 21.11$, $SD = 1.30$).

Assessment Instruments

Questionnaire 1 was divided into two sections (Part A and Part B) and used to measure variables used in Study 2 (current study) and Study 3. Questionnaire 2 was used to measure variables used in Study 4. Only assessment instruments in the first section (Part A) of Questionnaire 1 will be described here, as they are the ones relevant to the current study. Part A of Questionnaire 1 contained measures of demographic variables, sexual behaviour and experience, religiosity, general social perception of peer’s sexual behaviour, receipt of sex education, HIV/AIDS transmission knowledge, condom use experience, sexual assertiveness, attitude
towards condoms and intention to use condoms. There are no previously validated measures in the Indonesian context available for a number of variables of interest in this study. Consequently, a number of scales in Part A Questionnaire 1 were devised particularly for this research (Study 2 and Study 3).

All items in the questionnaires were developed in English and translated into Indonesian language (Bahasa Indonesia) for the actual questionnaires to be distributed to participants. To ensure the validity of translation, a bilingual person (English and Bahasa Indonesia) independent of the research project was requested to proofread the questionnaires and ensure the accuracy of translation (See Appendix E). The final draft questionnaires were pilot tested among two groups of Indonesians (N = 10) who were undergraduate students at the University of Melbourne to ensure the questions were clear and could be understood.

On the first page of the questionnaires was a project description. It contained information about the study and its importance. Participants were assured that the study was anonymous and were encouraged to answers all questions honestly. There was also information for participants should they wish to ask further questions or file a complaint in relation to this research. At the end of this page, the researcher thanked participants for their participation in this study.

**Demographic variables.** Participants were asked for demographic information, including age, sex, ethnicity, working status, parental education and job, and SES. A direct question of parental income as a guide to SES was deliberately avoided as most participants would not know their parents’ income. It is unusual for Indonesian parents to reveal their income to their children and it is also culturally taboo for the children to ask parents’ incomes (Prianggoro, 2011). According to Kolenikov and Angeles (2009), “Often, straightforward numeric measures of welfare
such as household income or consumption are not available or not reliable, especially in developing economies where a large fraction of economic activities may be carried out outside of the market” (p. 2). In this situation, a proxy for household socioeconomic status can be used. Proxies in socio-economic status can be measured by household access to amenities such as electricity or ownership of items, such as, television, refrigerator, bicycle, motorcycle, car, and other items. In Indonesia, for example, household income increases motorcycle ownership (Senbil, Zhang, & Fujiwara, 2007).

Therefore, in order to estimate SES, four questions on car and motorcycle ownerships and one question on the limit of household electricity power were used. Unlike in Australia, all households in Indonesia have electricity power limitations (Batas daya listrik) in which the higher the limit, the more expensive is the monthly property charge and the tariff for actual electricity used (per kilowatt-hour). Thus, families that have a higher limit are usually wealthier because they can afford some luxuries (such as air-conditioning). Similarly, not all families in Indonesia can afford to buy a car. Motorcycles are more common and generally in a large city like Surabaya, many families have a motorcycle. In a more middle class family, more than one motorcycle is quite common. Participants’ responses to the questions on electricity limitations and car and motorcycles ownership were assigned points and aggregated. The assigned points were as follows:

1. Limit of electricity:
   a. Below 1300 VA : 0
   b. Between 1300 and 2200 VA : 1
   c. Between 2200 and 3500 : 2
   d. Between 3500 and 6600 VA : 3
   e. Above 6600 : 4
2. Ownership of motorcycle and car:

   a. Each motorcycle : 1
   b. Each personal motor : 2
   c. Each car : 3
   d. Each personal car : 4

The aggregated data were then classified into five categories representing low (less than 2), lower middle (3 to 4), middle (5 to 6), upper middle (7 to 8), and high SES (above 9).

**Sexual behaviours and experience.** There were four questions presented to participants in relation to each type of partner (i.e., regular partner who is a girlfriend/boyfriend, regular partner who is not a boyfriend/girlfriend, casual partner who is a commercial sex worker, and casual partner who is not a commercial sex worker) that explored their sexual behaviours ranging from the activity of petting, oral, anal and vaginal sex, with three possible answers: “never done it/done once or rarely/done regularly”. There was also one open ended question about the number of partners the participant had had in their lifetime and one open ended question on number of partners in the last six months. Finally, one question asked about the age, place, and type of partner at first sexual encounter.

**Religiosity.** Religiosity was measured with three items assessing the frequency of praying, attendance at a mosque/church and self-assessment (i.e., “Do you regards yourself as a religious person?”). The response options ranged from “never/very unlikely/not at all” to “always/very likely/very much”. While research has revealed that it is important to consider both religion and religiosity in analyses of sexual beliefs and behaviours (e.g., de Visser et al., 2007), a question on the type of
religion was not included in this research since it was believed that this question could potentially create social desirability bias in answering the rest of the questions or could be perceived as being too sensitive.\textsuperscript{10} A total score was obtained by summing scores on each item. Thus, total scores ranged from 3 to a maximum of 15. The Cronbach’s alpha coefficient for this scale was $\alpha = .72$.

**Perception of peer sexual behaviours.** Perceptions of general social norms about peer sexual behaviour were assessed with the six following items: “How many men/women your age do you think have had sex?” (items 1 & 2) (response options were numbers out of 10), “At what age do you think most men/women start having sex?” (items 3 & 4) (response options: below 16; 17-18; 19-20; 20-21; above 21) and “Do you think that men/women who have a girlfriend/boyfriend sometimes have sex with others?” (items 5 & 6) (response options: never; seldom; sometimes; often; always).

The above items were descriptive measures and were used individually in descriptive statistical analyses. However, the items above were also aggregated and treated as an ordinal scale and the derived scale was used to measure the level of permissiveness towards peer sexual behaviour. To achieve this purpose, all answers were scored between 1 and 5, using this approach:

Item no 1 & 2: “How many men/women your age do you think have had sex (out of ten)?”, with possible answers and scoring system, as follows:

\textsuperscript{10} Section 156(a) of the Indonesian Criminal Code prohibits conduct that affronts a "recognised religion". Cases have been restricted to Islam. For example, in October 1990, Arswendo Atmowiloto, then editor of the *Monitor* newspaper, was arrested. He was reportedly responsible for publishing the results of a readers' poll on the most admired person in Indonesia, which showed that the Prophet Muhammad came in 11\textsuperscript{th} (Freedom House, 2010). The poll result triggered an explosion of hidden Muslim annoyance and caused widespread demonstrations (Rosyad, 2007).
Item no 3 & 4: “At what age do you think most men/women start having sex?”, with possible answers and scoring system, as follows:

- Below 16 : Very young (Score 5)
- 17-18 : Young (Score 4)
- 19-20 : Average (Score 3)
- 21-22 : Quite old (Score 2)
- Above 22 : Old (Score 1)

Item no 5 & 6: “Do you think that men/women who have a girlfriend/boyfriend sometimes have sex with others?”, with possible answers and scoring system, as follows:

- Always : (Score 5)
- Often : (Score 4)
- Sometimes : (Score 3)
- Seldom : (Score 2)
- Never : (Score 1)

All individual item scores were summed to form the Perception of Peer Sexual Behaviour scale. A higher score of the scale reflected a more permissiveness view towards peer sexual behaviour. The internal consistency reliability of the Perception of Peer Sexual Behaviour scale was $\alpha = .71$.

**Receipt of sex education.** Attendance at sex education was assessed with a single closed question, “Have you ever attended/participated in sex education?” with “yes” or “no” as the possible answers. This question was followed by a question on the frequency of attendance in sex education classes or seminars.

**Family happiness.** Family happiness and perceptions toward family discipline were also assessed in this study. There were six items measured for this
scale. Examples of items forming the Family Happiness scale were: “In your perception, do/did you have good communication with your father/mother?” (response options from “very good” to “very bad”) and “In general, are you psychologically satisfied with your family situation?” (response options from “very satisfied” to “very dissatisfied”). The internal consistency coefficient of the Family Happiness scale was .76.

**Perceived risks.** Perceived risks of pregnancy, STIs and HIV were measured in this study with a single item for each risk. There was one question asking “To what extent do you think you are vulnerable to be infected by STI”, one question asking “To what extent do you think you are vulnerable to be infected by HIV”, and one question asking “To what extent were you concerned about (you or your partner) becoming pregnant”. There were five response options available, ranging from “not at all” to “very concerned”.

**Knowledge about HIV transmission.** Knowledge about HIV transmission was assessed using eight questions. The scale used to measure this knowledge was derived from the National Survey of Australian Secondary Students, HIV/ AIDS and Sexual Health (Smith, Agius, Dyson, Mitchell, & Pitts, 2002) but contained fewer questions. Originally there were eleven statements in the Australian survey. Three statements concerning intercourse as the mode of transmission were omitted, and this concept was represented by one question only in this research (i.e., “Could a woman get HIV through having sex with a man?”). These questions were omitted because of the need for the questionnaire to be as concise as possible and as these questions were somewhat repetitive.

Six questions were used to evaluate participants’ knowledge about mode of transmission of HIV (i.e., whether HIV can be transmitted through needle sharing,
having sex, coughs or sneezes, mosquitoes, hugging, and mother to baby) and two questions assessed whether participants believed that condom use could prevent HIV transmission and whether someone who looks healthy could transmit HIV. All questions were close-ended and had two possible answers, “yes” or “no”. The response rate on correct answers will be reported later in this chapter.

**Procedure**

Ethics approval to conduct this research was gained from the University of Melbourne Human Ethics Committee prior to data collection (See Appendix B). In the first phase of research, the author contacted lecturers at the eight universities mentioned in the Participant section. The nature of this study was explained and an informal request was made to the lecturers to allow the researcher to recruit study participants from his/her class. None of the lecturers refused to help. The researcher then wrote a formal letter to the universities requesting permission to conduct the research. All the universities granted permission to the researcher to go into the class and recruit participants.

Following each university’s approval, the researcher contacted the lecturer again to arrange the time for first data collection (Time 1). On the day, the researcher went into the class with the lecturer. After a brief introduction and explanation by the lecturer, the researcher then gave information about the study to the students including the topic and the importance of the research, that the choice to participate was entirely voluntarily, and that participants could withdraw from the research at any time without penalty. Students were informed that their participation would have no effect on their grade in the subject in which they were enrolled. Students were also assured that this research was totally anonymous and that individual analyses would not be conducted. Participants were informed that questionnaires were numbered in
pairs (for each Questionnaire 1 and 2) so they could be match for data analysis for the purpose of Study 3 and Study 4. However, participants were guaranteed that the assigned number on the questionnaires could not be used to identify participants since there was no personal identity information asked in the questionnaires.

Questionnaire 1 was then distributed to all students in the class. Before they started, participants were once more reminded that involvement in this research was voluntarily. A private area was provided for questionnaire completion. Participants were asked to return their questionnaire to a sealed box within an hour. To ensure anonymity, participants were asked to put the questionnaire into the box by themselves. However, before the participants returned Questionnaire 1 into the box, participants were asked to pick up the copy of Questionnaire 2 that had the same number code as Questionnaire 1.

Soon after all participants had placed Questionnaire 1 into the box, the researcher explained about Questionnaire 2. All participants were requested to complete Questionnaire 2 regardless of their sexual status. If participants were sexually active, they were requested to complete the questionnaire soon after they had a sexual encounter. If they were sexually inactive or sexually active but did not have a sexual encounter within four weeks, they were asked an open ended question to give the reasons for being abstinent.

Participants were requested to bring back Questionnaire 2 to a specific class in the following month. A date was set and participants were asked to write this date on Questionnaire 2. The lecturer was requested by the researcher to remind their students in their class meeting a week before this date. However, whether lecturers were indeed reminding their students was not checked.
At the second class (four weeks after Questionnaire 1), participants returned Questionnaire 2 in a sealed box. As a token of appreciation for their involvement in this research, after they put their questionnaire into the box they were given a key ring. The researcher then concluded the data collection with a debriefing.

**Results**

**Participant Characteristics**

The age of participants ranged from 18 to 23 years with a mean of 21.1 years ($SD=1.30$). The sample comprised of mainly ethnic Javanese (67.8%) and Chinese (29.5%). The remaining 2.7% of other ethnicity include Padangnese, Bataknese, Banjarese, Balinese, Floresian, Makassarese, Manadonese or mixed between ethnicities (*campuran*). As is common among University students in Indonesia, the majority of participants were not in the workforce (81.3%). From a socio-economic status perspective, most participants came from middle class families (82%). A Mann-Whitney *U* test was conducted to evaluate the SES difference between Javanese and Chinese Indonesian ethnicity. The result of the test was statistically significant, $z = -10.02, p < .01$. Chinese Indonesian had an average rank of 547.03, while Javanese had an average rank of 372.16, suggesting that from a socio-economic status perspective, Chinese Indonesian had higher SES than Javanese.

Participants were also asked their parents’ highest level of formal education. Most parents had graduated from Year 12 secondary school (*Sekolah Menengah Atas*) but only 26.6% (father) and 15.3% (mother) had university degrees. Most fathers were self-employed (48.6%) and most mothers were classified by the participants as housewives.
Sexual Behaviour and Experience

Of participants, 32.4% (289 participants: 145 males and 144 females) indicated they had had sexual experience of some kind, ranging from non-penetrative sex, oral sex, anal sex and vaginal sex. Around 14% of all participants had engaged in vaginal sex. As can be seen from Table 2, of 289 sexually active subjects, the majority of the sample (87.54%) had had non-penetrative sex and 43.94% had engaged in vaginal sex. Whenever participants wish to talk about sex, they usually talk to their boyfriend or girlfriend (31.7%), friends in general (29.6%) and to their mother or female guardian (26.8%) (Table 3).

Table 2

<table>
<thead>
<tr>
<th>Percentage of Sexually Active Participants Engaged in Different Sexual Activities (N = 289)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
</tr>
<tr>
<td>Non-penetrative sex</td>
</tr>
<tr>
<td>Oral sex</td>
</tr>
<tr>
<td>Anal sex</td>
</tr>
<tr>
<td>Vaginal sex</td>
</tr>
</tbody>
</table>

Table 3

People that Participants Talk to About Sex:

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyfriend/girlfriend</td>
<td>282</td>
<td>31.70</td>
</tr>
<tr>
<td>Mother (female guardian)</td>
<td>240</td>
<td>26.97</td>
</tr>
<tr>
<td>Father (male guardian)</td>
<td>52</td>
<td>5.90</td>
</tr>
<tr>
<td>Male friends</td>
<td>158</td>
<td>17.75</td>
</tr>
<tr>
<td>Female friends</td>
<td>106</td>
<td>11.91</td>
</tr>
<tr>
<td>Siblings</td>
<td>10</td>
<td>1.13</td>
</tr>
<tr>
<td>Others</td>
<td>15</td>
<td>1.70</td>
</tr>
<tr>
<td>Never</td>
<td>27</td>
<td>3.03</td>
</tr>
<tr>
<td>Total</td>
<td>890</td>
<td>100.00</td>
</tr>
</tbody>
</table>
Most participants felt good (65.12%) and happy (18.60%) after their last sexual encounter. However, 16.28% of participants reported feeling bad, guilty or having been used. Most sexually active participants reported one monogamous relationship in their lifetime (76.1%), but there was a gender difference in which 83.3% females had only had one partner in their lifetime compared to 68% of male participants (Table 4). A chi-square test showed that this difference is statistically significant $X^2(df = 11, N = 272) = 19.74, p < .05$, that is more male than female participants had more than one partner. Furthermore, as shown in Table 5, during the previous 6 months, most participants only had one partner (69.3%) and only about 8% had had more than three partners.

Table 4

<table>
<thead>
<tr>
<th>Number</th>
<th>Males (%)</th>
<th>Females (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>68.0</td>
<td>83.3</td>
<td>76.1</td>
</tr>
<tr>
<td>2</td>
<td>11.7</td>
<td>9.0</td>
<td>10.3</td>
</tr>
<tr>
<td>3</td>
<td>6.3</td>
<td>2.8</td>
<td>4.4</td>
</tr>
<tr>
<td>4</td>
<td>2.3</td>
<td>1.4</td>
<td>1.8</td>
</tr>
<tr>
<td>5</td>
<td>5.5</td>
<td>1.4</td>
<td>3.3</td>
</tr>
<tr>
<td>6</td>
<td>0.8</td>
<td>2.1</td>
<td>1.5</td>
</tr>
<tr>
<td>≥ 7</td>
<td>5.6</td>
<td>0</td>
<td>5.6</td>
</tr>
<tr>
<td></td>
<td>$N = 128$</td>
<td>$N = 144$</td>
<td>$N = 272$</td>
</tr>
</tbody>
</table>

Table 5

<table>
<thead>
<tr>
<th>Number</th>
<th>Males (%)</th>
<th>Females (%)</th>
<th>Total (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>20.6</td>
<td>19</td>
<td>19.8</td>
</tr>
<tr>
<td>1</td>
<td>63.9</td>
<td>74.3</td>
<td>69.3</td>
</tr>
<tr>
<td>2</td>
<td>8.2</td>
<td>5.7</td>
<td>6.9</td>
</tr>
<tr>
<td>≥ 3</td>
<td>7.1</td>
<td>1</td>
<td>8.1</td>
</tr>
<tr>
<td></td>
<td>$N = 97$</td>
<td>$N = 105$</td>
<td>$N = 202$</td>
</tr>
</tbody>
</table>
Age at first sexual experience (ranging from non-penetrative sex, oral sex, anal sex and vaginal sex) is an important indicator of exposure to risk of pregnancy and STIs/HIV during adolescence. Reported age of first sexual encounter varied, with a range from 12 to 23 years ($M = 19.3$, $SD = 2.1$). As can be seen from Table 6 (next page), most participants started heterosexual activity between the ages of 17 to 21 years. A boyfriend or girlfriend was reported as the most usual first sexual partner (80%), followed by sex workers (10%) (Table 7, next page). A chi-square test showed that the proportion of type of first partner did not differ significantly between Javanese and Chinese Indonesian participants $X^2(df = 3, N = 230) = 2.33, p > .05$). A similar test that examined the difference between gender and type of first partner showed that the proportion of type of first partner did not differ significantly between males and females $X^2(df = 3, N = 230) = 3.34, p > .05$).

As can be seen in Table 8 (next page), it was evident that most first sexual encounters took place in the participant’s house in which their parents live. A chi-square test of independence was performed to examine the relation between ethnicity and being sexually active. The test showed that the proportion of Javanese who were sexually active, was not significantly different from the proportion of Chinese Indonesian who were sexually active $X^2(df = 1, N = 851) = 0.87, p < .05$).
Table 6

**Age at First Sexual Encounter**

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>13</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>14</td>
<td>1</td>
<td>.5</td>
</tr>
<tr>
<td>15</td>
<td>5</td>
<td>2.4</td>
</tr>
<tr>
<td>16</td>
<td>7</td>
<td>3.3</td>
</tr>
<tr>
<td>17</td>
<td>21</td>
<td>10.0</td>
</tr>
<tr>
<td>18</td>
<td>26</td>
<td>12.4</td>
</tr>
<tr>
<td>19</td>
<td>41</td>
<td>19.5</td>
</tr>
<tr>
<td>20</td>
<td>47</td>
<td>22.4</td>
</tr>
<tr>
<td>21</td>
<td>34</td>
<td>16.2</td>
</tr>
<tr>
<td>22</td>
<td>12</td>
<td>5.7</td>
</tr>
<tr>
<td>23</td>
<td>13</td>
<td>6.2</td>
</tr>
<tr>
<td>Total</td>
<td>210</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 7

**Type of First Partner**

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boyfriend/girlfriend</td>
<td>184</td>
<td>80.0</td>
</tr>
<tr>
<td>Sex worker</td>
<td>22</td>
<td>9.6</td>
</tr>
<tr>
<td>Friend</td>
<td>14</td>
<td>6.1</td>
</tr>
<tr>
<td>Others</td>
<td>10</td>
<td>4.3</td>
</tr>
<tr>
<td>Total</td>
<td>230</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 8

**Place of First Encounter**

<table>
<thead>
<tr>
<th>Location</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male's house</td>
<td>73</td>
<td>32.6</td>
</tr>
<tr>
<td>Female's house</td>
<td>64</td>
<td>28.6</td>
</tr>
<tr>
<td>Hotel/motel</td>
<td>44</td>
<td>19.6</td>
</tr>
<tr>
<td>Male's boarding room</td>
<td>10</td>
<td>4.5</td>
</tr>
<tr>
<td>Female's boarding Room</td>
<td>4</td>
<td>1.8</td>
</tr>
<tr>
<td>Car</td>
<td>4</td>
<td>1.8</td>
</tr>
<tr>
<td>Others</td>
<td>25</td>
<td>11.2</td>
</tr>
<tr>
<td>Total</td>
<td>224</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Perceptions of Peers’ Sexual Behaviour

As can be seen in Table 9, participants in general perceived that their friends were sexually active. Nearly 67% of participants believed that between 20% and 60% of their female friends were sexually active and 85% of participants believed that between 20% and 80% of their male friends had had a sexual relationship. Most participants believed that the first sexual encounter of their peers occurred before the age of 23 but as many as 21% of participants believed that their male friends had their first sexual encounter prior to 16 years old (Table 10).

Table 9

<table>
<thead>
<tr>
<th>Percentage of friends</th>
<th>Male friends</th>
<th>Female friends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>&lt; 20%</td>
<td>87</td>
<td>9.9</td>
</tr>
<tr>
<td>20-40%</td>
<td>210</td>
<td>24.0</td>
</tr>
<tr>
<td>40-60%</td>
<td>301</td>
<td>34.4</td>
</tr>
<tr>
<td>60-80%</td>
<td>240</td>
<td>27.4</td>
</tr>
<tr>
<td>80-100%</td>
<td>37</td>
<td>4.2</td>
</tr>
<tr>
<td>Total</td>
<td>875</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 10

<table>
<thead>
<tr>
<th>Age of First Sexual Encounter</th>
<th>Male friends</th>
<th>Female friends</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>&lt; 16yo</td>
<td>189</td>
<td>21.4</td>
</tr>
<tr>
<td>17-18yo</td>
<td>186</td>
<td>21.1</td>
</tr>
<tr>
<td>19-20yo</td>
<td>217</td>
<td>24.6</td>
</tr>
<tr>
<td>21-22yo</td>
<td>261</td>
<td>29.6</td>
</tr>
<tr>
<td>&gt;23</td>
<td>30</td>
<td>3.4</td>
</tr>
<tr>
<td>Total</td>
<td>883</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Predictors of Being Sexually Active.

To identify determinants of being sexually active or not sexually active, a bivariate analysis was conducted, followed by logistic regression analysis, in which significant findings from bivariate correlations were entered into the equations. There were in total 11 variables examined in bivariate correlations. Chi-square was employed to examine relationships between sexual activity status (i.e., had experienced sexual activity of any kind or not) and other categorical variables (i.e., gender, working status, parents’ economic status and education, ethnicity, and attendance of sex education). T-tests were used to examine relationships between sexual activity status and other continuous variables (i.e., age, religiosity, perceptions of family happiness and perceptions of general social norms about peer sexual behaviour). As can be seen in Table 11 (next page), seven variables were significantly correlated with sexual behaviour status, they were gender \( X^2(df = 1, N = 892) = 16.51, p < .01 \), working status \( X^2(df = 1, N = 889) = 10.62, p < .01 \), SES \( X^2(df = 1, N = 892) = 5.56, p < .05 \), age \( t(531) = -2.97, p = .00 \), religiosity \( t(870) = 6.50, p = .00 \), perception of peer’s sexual behaviour \( t(599) = -5.16, p = .00 \), and perception of family happiness \( t(880) = 4.57, p = .00 \). However, although statistically significant, the strength of correlations were small (Pallant, 2007).

All seven variables (i.e., gender, working status, SES, age, religiosity, perception of peer’s sexual behaviour, and perception of family happiness) were then entered into a logistic regression analysis to predict the likelihood of being sexually active or not. A test of the full model against a constant only model was statistically significant, indicating that, as a set, the predictors reliably distinguished between sexually active and sexually inactive participants \( X^2 = 89.53, p < .01, df = 6 \). Nagelkerke’s \( R^2 \) of .15 indicated a small relationship between prediction and
grouping. Prediction success overall was 71% (92.8% for sexually inactive and 24% for sexually active). As can be seen in Table 12, the Wald criterion demonstrated that all independent variables entered made significant contribution to the prediction of variance between the two groups.

Table 11

Summary of Relationships Between Sexual Behaviour Status and Other Variables

<table>
<thead>
<tr>
<th></th>
<th>Had experience sexual activity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>df</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
</tr>
<tr>
<td>Working status</td>
<td>1</td>
</tr>
<tr>
<td>Status of economic</td>
<td>1</td>
</tr>
<tr>
<td>Age</td>
<td>531</td>
</tr>
<tr>
<td>Religiosity</td>
<td>870</td>
</tr>
<tr>
<td>Perception of peer's sexual behaviour</td>
<td>599</td>
</tr>
<tr>
<td>perception of family happiness</td>
<td>880</td>
</tr>
</tbody>
</table>

**. Significant at the 0.01 level
*. Significant at the 0.05 level

Table 12

Results of Logistic Regression Predicting Being Sexually Active

<table>
<thead>
<tr>
<th></th>
<th>$\beta$</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95.0% C.I. for EXP($\beta$)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower</td>
<td>Upper</td>
</tr>
<tr>
<td>Gender (Male)</td>
<td>0.46</td>
<td>0.00</td>
<td>1.59</td>
<td>1.16</td>
</tr>
<tr>
<td>Working status (Working)</td>
<td>0.55</td>
<td>0.00</td>
<td>1.74</td>
<td>1.18</td>
</tr>
<tr>
<td>Status economics (Higher)</td>
<td>0.15</td>
<td>0.03</td>
<td>1.17</td>
<td>1.01</td>
</tr>
<tr>
<td>Religiosity (Religious)</td>
<td>-0.15</td>
<td>0.00</td>
<td>0.86</td>
<td>0.81</td>
</tr>
<tr>
<td>Perception of peer's sexual behaviour (Permissive)</td>
<td>0.09</td>
<td>0.00</td>
<td>1.09</td>
<td>1.05</td>
</tr>
<tr>
<td>Perception of family happiness (Happy)</td>
<td>-0.07</td>
<td>0.01</td>
<td>0.93</td>
<td>0.88</td>
</tr>
</tbody>
</table>

As can be inferred from the Table 12, significant predictors of not being sexually active were being female, not working, being from a lower SES, higher
religious involvement, having a lower perception of peers’ permissive sexual behaviour, and having a higher perception of family happiness.

**Perceived Risks of Pregnancy, STIs and HIV**

Individual responses to each of the perceived risks were treated as ordinal data because although the response levels do have relative position, it cannot be presumed that participants perceived the difference between adjacent levels to be equal as required by interval data (Jamieson, 2004). Of females who engaged in vaginal intercourse, 25.5% said that they were not at risk of pregnancy, and 15.7% said they were extremely concerned that they were at risk. By contrast, 30% of males said that their partner was not at risk of pregnancy, and only 10% said they were extremely at risk (Table 13, next page). A Mann-Whitney U test was conducted to examine the difference between male and female perceptions of risk of pregnancy and the test showed that there was no statistically significant difference between the two groups’ median perceived risk of pregnancy ($U=1541, p = .18$).

The majority of sexually active participants believed that they were not at risk of getting HIV/AIDS (Table 14, next page). Only 3.0% of females and 4.3% of males believed that they were very likely to be infected by HIV. A Mann-Whitney U test showed that males were significantly more likely than females to hold this perception ($U = 8332, p = .01$). Similar to HIV/AIDS risk perception, the perception of being at risk of being infected by STI was low, with 5.0% of male participants being very concerned about contracting STIs compared to 3% of females (Table 15, next page). A Mann-Whitney U test confirmed that the difference between females and males was statistically significant ($U = 7773, p = .00$).
Table 13

Percentage of Pregnancy Risk Perception Among Sexually Active

<table>
<thead>
<tr>
<th></th>
<th>1 (Not at all)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>N 13</td>
<td>13</td>
<td>6</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>(%) 25.49</td>
<td>25.49</td>
<td>11.76</td>
<td>21.57</td>
<td>15.69</td>
</tr>
<tr>
<td>Male</td>
<td>N 21</td>
<td>23</td>
<td>10</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>(%) 30.00</td>
<td>32.86</td>
<td>14.29</td>
<td>12.86</td>
<td>10.00</td>
</tr>
<tr>
<td>Total</td>
<td>N 34</td>
<td>36</td>
<td>16</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>(%) 28.10</td>
<td>29.75</td>
<td>13.22</td>
<td>16.53</td>
<td>12.40</td>
</tr>
</tbody>
</table>

Table 14

Percentage of HIV/AIDS Risk Perception Among Sexually Active

<table>
<thead>
<tr>
<th></th>
<th>1 (Not at all)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>N 117</td>
<td>10</td>
<td>1</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(%) 87.31</td>
<td>7.46</td>
<td>.75</td>
<td>1.49</td>
<td>2.99</td>
</tr>
<tr>
<td>Male</td>
<td>N 106</td>
<td>24</td>
<td>3</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>(%) 75.18</td>
<td>17.02</td>
<td>2.13</td>
<td>1.42</td>
<td>4.26</td>
</tr>
<tr>
<td>Total</td>
<td>N 223</td>
<td>34</td>
<td>4</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>(%) 81.09</td>
<td>12.36</td>
<td>1.45</td>
<td>1.45</td>
<td>3.64</td>
</tr>
</tbody>
</table>

Table 15

Percentage of STI Risk Perception Among Sexually Active

<table>
<thead>
<tr>
<th></th>
<th>1 (Not at all)</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>N 113</td>
<td>15</td>
<td>1</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>(%) 84.33</td>
<td>11.19</td>
<td>.75</td>
<td>.75</td>
<td>2.99</td>
</tr>
<tr>
<td>Male</td>
<td>N 94</td>
<td>32</td>
<td>6</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>(%) 66.67</td>
<td>22.70</td>
<td>4.26</td>
<td>1.42</td>
<td>4.96</td>
</tr>
<tr>
<td>Total</td>
<td>N 207</td>
<td>47</td>
<td>7</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>(%) 75.27</td>
<td>17.09</td>
<td>2.55</td>
<td>1.09</td>
<td>4.00</td>
</tr>
</tbody>
</table>

Past Experience of Condom Use and Contraception

Only a very small proportion of participants who practised vaginal sex reported always using a condom (7.8%). Some participants used condoms approximately half of the time (20.3%) while the majority used condoms less than half time (48.5%). Self-report of frequency of past condom use was different from
participants’ estimation of frequency of their peers’ condom use which they overestimated. As can be seen in Table 16, on average participants estimated that 11.4% of their peers always used condoms, 39.6% used condoms approximately 50% of the time for vaginal intercourse, and 24.6% used condoms less than 50% of the time for vaginal intercourse. A large proportion of both male and female participants believed that females were usually the initiator of condom use (77.5%).

Contraception methods other than condom use were not popular among young people (as found in the focus group discussions). Only 22 of 213 (9.9%) sexually active participants reported using contraception methods other than condoms. Among those 22 participants, using contraceptive pills was the most cited (40.9%) followed by the calendar method (36.4%) and although withdrawal method (coitus interruptus) is not exactly a contraception method, it was also employed (22.7%) as a method to prevent pregnancy.

<table>
<thead>
<tr>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>89</td>
</tr>
<tr>
<td>Rare</td>
<td>212</td>
</tr>
<tr>
<td>Sometimes</td>
<td>341</td>
</tr>
<tr>
<td>Often</td>
<td>120</td>
</tr>
<tr>
<td>Always</td>
<td>98</td>
</tr>
<tr>
<td>Total</td>
<td>860</td>
</tr>
</tbody>
</table>

Knowledge about HIV Transmission

As confirmed in two-way between- groups analysis of variance, there were no differences in level of knowledge in HIV transmission between males and females and sexual experience. The main effect for gender \( F(1, 852) = 1.20, p = .27 \), sexual
experience \( \frac{F(1,852) = .60, p = .44} \) and the interaction effect \( \frac{F(1,852) = 1.79, p = .18} \) did not reach statistical significance. Overall, knowledge about transmission was quite low \( (M = 3.36, SD = .94) \). Response rates to particular questions are provided in Table 17 (next page).

The majority of participants knew that hugging could not transmit HIV (94%), that HIV could be transmitted via sexual intercourse (93.7%), and that the mosquito could not transmit HIV (72%). However, most participants did not have knowledge that HIV could be transmitted perinatally (2%), that needle sharing could transmit HIV (6.2%) and that someone who looks very healthy could pass on HIV (12.5%). The number of participants who answered “yes” to one important question “If condoms are used during sex, does this help to protect people from getting HIV?” was also low (34.7%).
Table 17

*Percentage of Correct Responses on Knowledge About HIV Transmission Items by Male and Female and Sexually Active and Inactive Participants*

<table>
<thead>
<tr>
<th>Questions</th>
<th>Males</th>
<th>Females</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could a person get HIV (AIDS virus) by sharing a needle and syringe with someone when injecting drugs?</td>
<td>10.4</td>
<td>4.2</td>
<td>5.9</td>
</tr>
<tr>
<td>2. Could a woman get HIV through having sex with a man?</td>
<td>91</td>
<td>95.8</td>
<td>93.6</td>
</tr>
<tr>
<td>3. If someone with HIV coughs or sneezes near other people, could they get the virus?</td>
<td>20.3</td>
<td>27.3</td>
<td>26.4</td>
</tr>
<tr>
<td>4. Could a person get HIV from mosquitoes?</td>
<td>72.7</td>
<td>76.2</td>
<td>71.8</td>
</tr>
<tr>
<td>5. If a woman with HIV pregnant, could her baby become infected with HIV?</td>
<td>4.9</td>
<td>1.4</td>
<td>2.1</td>
</tr>
<tr>
<td>6. Could a person get HIV by hugging someone who has it?</td>
<td>92.3</td>
<td>93.7</td>
<td>92.5</td>
</tr>
<tr>
<td>7. If condoms are used during sex, does this help to protect people from getting HIV?</td>
<td>27.3</td>
<td>27.8</td>
<td>38.9</td>
</tr>
<tr>
<td>8. Could someone who looks very healthy pass on HIV infection?</td>
<td>16.7</td>
<td>8.3</td>
<td>14.9</td>
</tr>
</tbody>
</table>

*Figure 8.* Percentage of correct responses on the HIV transmission knowledge questionnaire.
As can be concluded from Figure 8 (previous page), knowledge about HIV transmission was poor. The mean number of correct answers was only 3.36 where the scale ranged from 0 to 8. It is much lower than the knowledge among Australian secondary school students (Smith et al., 2002; Smith, Agius, Mitchell, Barrett, & Pitts, 2009) in which their (i.e., year 12 students) average mean was 9.5 of a possible maximum 11 if they answered all questions correctly.

As can be seen in Table 18, Pearson product-moment correlations, t-tests and ANOVAs (depending on the nature of the independent variable) were employed to examine if there were relationships between level of knowledge about HIV transmission and other variables (namely sex, age, working status, parents’ economic status, occupation and education, ethnicity, attendance of sex education, living with parents, religiosity, perceptions of family discipline and happiness, perceptions of general social norms about peer sexual behaviour, sexual behaviour status, attitude towards condom, and degree of sexual assertiveness).

Table 18

<table>
<thead>
<tr>
<th>Variables</th>
<th>r</th>
<th>(df) t-test</th>
<th>(df) F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>---</td>
<td>(854) 1.73</td>
<td>---</td>
</tr>
<tr>
<td>Age</td>
<td>-.08*</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Working status</td>
<td>---</td>
<td>(266) 1.42</td>
<td>---</td>
</tr>
<tr>
<td>Father’s education</td>
<td>---</td>
<td>---</td>
<td>(4, 835) 2.50</td>
</tr>
<tr>
<td>Mother's education</td>
<td>---</td>
<td>---</td>
<td>(4, 832) 1.50</td>
</tr>
<tr>
<td>Status of economic</td>
<td>---</td>
<td>---</td>
<td>(4, 851) 1.17</td>
</tr>
<tr>
<td>Ethnicity</td>
<td>---</td>
<td>---</td>
<td>(2, 848) .79</td>
</tr>
<tr>
<td>Attending sex education</td>
<td>---</td>
<td>(851) -1.50</td>
<td>---</td>
</tr>
<tr>
<td>Living with parents</td>
<td>---</td>
<td>(852) .99</td>
<td>---</td>
</tr>
<tr>
<td>Religiosity</td>
<td>.09**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family happiness</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peers’ sexual behaviour perception</td>
<td>-.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual behaviour status</td>
<td>---</td>
<td>(854) 1.15</td>
<td>---</td>
</tr>
<tr>
<td>Attitude toward condoms</td>
<td>-.12**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual assertiveness</td>
<td>-.04</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Significant at the 0.01 level; * Significant at the 0.05 level; ¹ N = 640 ; ² N = 680
Because there were no gender or sexual behaviour status differences, all data were combined for this analysis and it was found that there were significant correlations between level of HIV transmission knowledge and age ($r = -.08, N = 856, p < .05$), attitude towards condoms ($r = -.12, N = 634, p < .01$) and religiosity ($r = .09, N = 837, p < .01$). However, all the correlations were very small.

**Discussion**

This study extended our understanding of sexual attitudes and behaviours in young Indonesian adult university students using questionnaire methodology. Approximately 32% of 892 participants reported sexual experiences ranging from non-penetrative to penetrative sex. Around 14% of all participants or 44% of sexually active participants had engaged in vaginal sex. Compared to Australian secondary students, this figure is a low proportion, with as many as 78% of Australian students having experienced some form of sexual activity (Smith et al., 2009). However, if these young Indonesian adults are not engaging in safe sex, this still represents a very large number of people at risk of STIs. In addition, this proportion may be expected to grow. Australian data has shown there was an increase in the proportion of students who had experienced sexual intercourse from 2002 (35%) to 2008 (40%) (Smith et al., 2009). This finding suggests that although in Indonesia there is currently a relatively low number of young people engaged in sexual activity, if a similar trajectory is followed, it might be expected that this proportion will grow.

Of participants who reported sexual activity, there was no difference between Javanese and Chinese Indonesian in the likelihood of being sexually active. The implication of this finding is that standardised sex education and safe sex prevention strategies could and should be provided to all young people in Indonesia, regardless of their cultural backgrounds. This study, however, found that participants of higher
SES were more likely to be sexually active, and that Chinese Indonesian students had significantly higher SES than Javanese participants. This finding could explain the existing perception described in Study 1 of this thesis that young adult Chinese Indonesian are more likely to be sexually active or to regularly use sex worker services, since the Chinese Indonesian are more likely to wealthy than the Javanese.

Attending sex education classes was not associated with the decision to become sexually active, consistent with evidence that has been widely documented in academic research worldwide (D. Kirby, 2007, 2011). This finding in the Indonesian context is important since many political and religious commentators have hypothetically argued that secular sex education will encourage attendees to start to engage in sexual activity\textsuperscript{11}. Furthermore, consistent with other studies (Das et al., 2011; Haglund, 2010; Štulhofera, Šohb, Jelaskac, Baćaka, & Landripeta, 2010; Zaleski & Schiaffino, 2000) religiosity was also found to be a barrier factor to becoming sexually active. That is, the more religious the person, the less likely they will become sexually active. It is then understandable that sex education with a religious approach in which abstinence is strongly recommended is usually a more acceptable approach in Indonesia. Bennett (2007) argued that sex education does not contradict the Islamic teachings and can even provide a theoretical and moral framework for young people, so long as sexual education teaches the Islamic preference for pre-marital abstinence.

Although this result provides support for interventions within a religious approach (i.e., abstinence only) which has the potential to postpone the timing of the initiation of sexual intercourse, research in Western and other developing countries

\textsuperscript{11} Recently, the Indonesian Education Minister Professor Muhammad Nuh, objected to the idea of adding sex education to the curriculum, “No! … I may be obsolete … but I think this is something you should learn about naturally” (Holtz, 2011; Radio Radio Australia, 2010).
has shown that abstinence only programmes currently have several limitations: (1) the content of abstinence only programmes varied greatly and therefore solid evidence of the efficacy of these programmes cannot yet be establish, (2) when participants who receive abstinence only programmes become sexually active, they may be less knowledgeable about STIs and less likely to believe that condoms provide effective protection against them (Avert, n.d.-b; Underhill, Operario, & Montgomery, 2007), and that (3) by promoting religion-based abstinence only programmes, non-abstinence approaches may become social taboo and create stigma against those who are sexually active. Thus, in light of public health interest, a comprehensive sex education programme that views sexuality as integral part of life and sex education as a lifelong process, should be conducted and promoted. Sex education may include the importance of sexuality and address sexual development, reproductive health, interpersonal relationships and communication, affection, intimacy, body image, gender roles, abstinence, and contraceptive options (Howard-Barr & Kirby, 1996). Another possibility that could be adopted within religion-based sex education but one that would also provide reproductive health knowledge, is through the Abstinence Plus programme that is widely conducted in the United States. Abstinence Plus is sex education that strongly promotes abstinence and emphasizes the benefits of abstinence but also promotes safe sex strategies, including information about non-coital sexual behaviour, contraception, and disease prevention methods (Howard-Barr & Kirby, 1996). Although this approach would need adjustment to the Indonesian context, it shows the potential of combination between reproductive health and sex education within a religious context.

A relationship between being sexually active and perception of participants’ family happiness was also found in this study. Higher perception of family happiness,
which included perceived good communication with parents, was associated with not becoming sexually active. This study also found that males were more likely to engage in sexual activity than females. As a representation of traditional gender norms, where it is more acceptable for males than females to be “naughty”, this finding in the Indonesian context comes as no surprise. It was also found that working was associated with higher likelihood of being sexually active. The possible reason for this situation is that already working is perceived as indicative of a readiness to marry and thus young adults in this situation who are in a serious relationship may be less reluctant to be involved in a physical relationship. In Indonesia, the notion of "study first" ("kuliah dulu") is widely used to discourage adolescents and young adults who are still in formal education from pre-marital sex. The reason behind this notion is that most sex before marriage practiced by unmarried couple bears high risk of pregnancy and pregnancy will lead to education disruption as most unmarried pregnant students will be ashamed to go to schools, expelled from schools or prohibited from sitting in the National Exam which will make them unable to obtain necessary school certificate. Typically, parents have sacrifice so much so that their children can go to university and they want to see their children earn a degree. An education degree itself is regarded highly important as a symbol of social status and higher education qualifications are considered essential to secure a good job (Parker & Nilan, 2013). Ethnographic research by Munro (2012) among Dani (Papua) university students in Indonesia confirmed the importance of finishing study and the open acknowledgement of the male partner that the child is his in case of pregnancy out of marriage. Thus, for many Indonesians, so long that as pregnant students can still secure a degree and there is open acknowledgement of the child’s father, it is usually an acceptable situation. However, to secure a degree while
pregnant and at the same time financially dependent on parents is a very difficult situations.

One important finding was that this research confirmed that condom use among young adults is very low, with less than 10% of participants reporting using a condom in their sexual intercourse. From a psychosocial perspective, it is very likely that the combination of perceived low risk of STIs/HIV and the low knowledge of HIV transmission as observed qualitatively in Study 1 and evident in this research, contribute to the low use of condoms. Basic interventions that address the knowledge of transmission are needed to increase awareness of the need for safe sex in young people.

**Conclusion**

The aim of this study was to extend understanding of sexual behaviour and beliefs of young heterosexual adults in Indonesia. As evident in this study, more than 30% of Indonesian young people have engaged in a sexual relationship. In light of the rising age of marriage among Indonesians young adults, there is the possibility that abstinence is only temporary and they become sexually active before marriage. Young people need to make decisions and protect themselves from unwanted pregnancy, STIs and HIV, and that includes committing to abstinence or utilizing other safe sex methods. Contrary to the belief held widely by the Indonesian authorities and religious leaders (Nurhan, 2010; Parker & Nilan, 2013), this study confirms there was no association between attending sex education and becoming sexually active. Knowledge about HIV transmission as well as condom use was very low. Although religiosity appears to play a role as a barrier factor, it is important that knowledge and strategies for safe sex other than abstinence are also taught to all young people. Research has shown that it is possible to combine different safe sex
strategies (i.e., promoting abstinence, promoting condom use, and a combination of abstinence, condom use and HIV risk–reduction) in an intervention programme (Jemmott et al., 2010).
Chapter 8

Study 3: Predicting Intention to Use a Condom

As indicated in Chapter 4, in relation to health protective and risk behaviours, despite all the arguments and debates, research over the years does indicate that: (1) the TRA/TPB has better predictive and practical utility compared to other models (Armitage & Talibudeen, 2010), and (2) its variables sometimes cannot fully capture all the behavioural phenomena and, thus, may require additional variables (Groeneboom et al., 2009; Hamilton, Daniels, White, Murray, & Walsh, 2011; Turchik, 2010). This is particularly true in a study of safe sex behaviour, a behaviour that is often highly complex (Bennetti & Bozionelos, 2000; Cha, Kim, & Patrick, 2008; Turchik, 2010). Therefore, the TPB was chosen as the guiding framework in the present study of predictors of safe sex behaviours in young adult Indonesian university students.

In an attempt to improve the predictive power of the model, the strategy adopted was to incorporate other variables that have been shown in previous research in Western and African countries to be relevant in the prediction of safe sex behaviours. For instance, previous research has indicated that social structure – for example, socio-economic status (SES) and gender roles — was correlated with adolescent condom use and added to the predictive utility of the TPB as confirmed in a recent study by Abraham et al. (2011). In their research, SES, gender and lifestyle aspirations accounted for between 2 and 7% of the variance in behaviour-specific cognitions predicting condom use. Furthermore, mother’s SES and gender added an additional 5%, after controlling for lifestyle and educational aspirations. Overall, including significant moderation effects, social structure indices increased the variance explained from 20.5% to 31% (Abraham et al., 2011).
The inclusion of additional variables may have some disadvantages theoretically, such as the loss of the model’s parsimony and can lead to an unclear relationship to the original theories (D. P. French et al., 2007; D. P. French et al., 2005; Kashima & Gallois, 1993; Lewis & Kashima, 1993). However, it is important to note that the overall purpose of this study is very practical, that is, to gain a better understanding of safe sex behaviours in the Indonesian context and to enable better behavioural intervention, rather than advancing the model itself. Recently, Ajzen (2011c) and Fishbein and Ajzen (2010) acknowledged that additional predictors could be proposed and added to TPB, with careful deliberation and empirical exploration.

It is also important to note that while research into safe sex behaviour has been conducted over decades in Western and African countries, this is not the case in Indonesia. A search of electronic resources through the University of Melbourne’s Buddy (Proquest Direct, PsycINFO, Medline, Expanded Academic ASAP) in 2002 when this research began, using keywords “Indonesia sex”, “Indonesia condom” and “Indonesia HIV” revealed only seven studies in five different journals (Basuki et al., 2002; Ford, Wirawan, & Fajans, 1993; Ford, Wirawan, Reed, Muliawan, & Sutarga, 2000; Ford, Wirawan, Suastina, Reed, & Muliawan, 2000; Thorpe, Ford, Fajans, & Wirawan, 1997; Wirawan, Fajans, & Ford, 1993; Wolffers et al., 1999), in which all the subjects were sex workers and their clients. In 2011, a similar search using the same keywords on ProQuest, PsycINFO and Medline, revealed 37 new publications in international journals from diverse discipline between 2003 and 2011 (specific Indonesian studies only, excluding comparison studies between countries). Although this does not mean that these were the only studies that have ever been conducted in Indonesia, it does reflect the dearth of safe sex research and the difficulty in finding reports even in Indonesian language, as they are often not publicly available. It is also
clear that there are fewer studies of determinants of sexual behaviour in the Indonesian context compared to many other countries, for instance in Uganda (Bartholomew, Parcel, Kok, Gottlieb, & Fernandez, 2011). The use of the TRA/TPB in Indonesian safe sex behavioural research is even more limited as most people who are actively involved in HIV/AIDS prevention come from a medical, anthropological or sociological background (Susami, Gunawan, & Hira, 2009).

The fact that sex workers and their clients are frequently the subject of research is not surprising. According to the Indonesian HIV/AIDS prevention policy described in the national strategy (National AIDS Commission, 2003, 2007), prevention efforts should target high-risk groups rather than high-risk behaviours. Although high risk groups might be a matter of priority – mostly due to limited funding — this approach has many serious disadvantages as it may create the fantasy that people outside the high-risk groups are safe from the transmission of STIs and HIV in particular. As can be learned from early AIDS epidemiology, publicity of the association between the homosexual group and HIV infection was not beneficial in preventing the spread of STIs/HIV (McElroy & Townsend, 2009). Furthermore, as has already happened in Indonesia and elsewhere, the focus on certain types of people can create stigmatisation (Loutfy et al., 2012; Pulerwitz, Michaelis, Weiss, Brown, & Mahendra, 2010).

Occasionally, there are reports about research into sex behaviours of Indonesian adolescents that appear in newspapers (e.g., Kelana, 2004; Lembaga Studi Cinta dan Kemanusiaan serta Pusat Pelatihan Bisnis dan Humaniora, 2002; Reuters/JG, 2011). However, these are mostly concerned with the statistics and moral aspects of young people who are sexually active, which is commonly referred to as *pergaulan bebas* (‘free socializing’) and *seks bebas* (‘free sex practice and actors’).
The moral panic is nationwide, and shared by the government and religious authorities, the media, parents, and young people themselves (Bennett, 2007; Harding, 2008; Parker & Nilan, 2013; Smith-Hefner, 2009). There is clearly an urgent need for a better understanding of variables associated with safe and risky sexual behaviours in young adults in Indonesia.

To establish a comprehensive understanding of intention to use condoms in the Indonesia context, the TPB categories were used but with additional variables. Specifically, this study will examine general intention to use a condom, that is an intention that is independent of a specific event and measured some time before the actual behaviour occurs, which in this research is described as Prior Intention (Boldero et al., 1992; de Visser & Smith, 1999, 2001a, 2004). Prior Intention is expected to be predicted by the TPB variables, namely Attitudes to use a condom, Subjective Norm, and PBC. Attitudes to use a condom is defined as the individual's positive or negative evaluation about performing condom use behaviour. Subjective Norm is defined as an individual's perception of whether people important to the individual think that condom use behaviour should be performed. PBC is defined as the perceived ease or difficulty of performing condom use behaviour.

Additional variables to the TPB variables that will be examined are gender, age, working status, ethnicity, parental education, economic status, sex education, and sexual behaviour status (i.e., sexually active and inactive). Furthermore, perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms were also examined to gain a more thorough understanding of predictors of Prior Intention. In addition, differences in beliefs of participants who are identified as intending to use a condom (Intenders)
compared to those who are not intending to use a condom (Non-Intenders) will be examined.

As described in Chapter 5, this study attempted to answer the following hypotheses:

1. There will be differences in Prior Intention to use a condom between males and females and sexual behaviour status:
   a. Sexually inactive participants will have stronger Prior Intention than sexually active participants;
   b. Sexually inactive males will have stronger Prior Intention than sexually active males;
   c. Sexually inactive females will have stronger Prior Intention than sexually active females;
   d. Sexually active females will have stronger Prior Intention than sexually active males.

2. The attributes of Behavioural Belief, Normative Belief and Control Belief will vary between Intenders and Non-Intenders.

3. The attributes of Behavioural Belief, Normative Belief and Control Belief will vary between gender and intenders status in sexually active participants.

4. Attitudes toward condom use, Subjective Norms, PBC, and Prior Intention to use a condom will vary in relation to gender, age, working status, ethnicity, parental education, economic status, sex education, and sexual behaviour status (i.e., sexually active and inactive):
   a. Females will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than males;
b. Older participants will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than younger participants;

c. Participants who are in the workforce will have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than those who are not in the workforce;

d. It is hypothesised that the Chinese Indonesian will have different Attitudes, Subjective Norms, PBC, and Prior Intention compared with Javanese participants;

e. Participants who have educated parents will be more likely to have more positive (higher) Attitudes, Subjective Norms, PBC, and Prior Intention than participants who have lower educated parents;

f. Participants who come from higher SES will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who come from lower SES;

g. Participants who had received sex education will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who have never received sex education;

h. Participants who are sexually inactive will have more positive Attitudes, Subjective Norms, PBC, and Prior Intention than participants who are sexually active.

5. Prior Intention to use a condom will be predicted by Attitudes, Subjective Norms, PBC in using a condom, perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms.

The model, based on the hypotheses above, is illustrated in Figure 9 (next page).
Figure 9. Relationship amongst variables tested in Study 3
Method

Data collection methods for this study were identical to Study 2 as data for both studies (Study 2 and Study 3) used the same questionnaire, Questionnaire 1. Questionnaire 1 was divided into two sections: Part A (Appendix E) for the purpose of Study 2 data collection; and Part B (Appendix F) for the purpose of Study 3 data collection. Thus, data for the two studies were collected at the same time with the same procedure and participants.

Participants

As described in Chapter 7, all participants were university students who were enrolled in one of eight universities and who consented to participate in this research. These universities were all located in Surabaya and were deliberately selected to enable wide demographic and SES differences to be captured.

In total, 1178 questionnaires were distributed to the students and 1039 were returned to the researcher (response rate of 88.20%). The majority of participants were heterosexual (98.15%). Less than 1% of female participants and about 1% of male participants reported being attracted to the same sex. An initial screening revealed that 147 questionnaires could not be used for analysis due to severely incomplete answers or due to participants being married, more than 23 years old or non-heterosexual. This initial screening resulted in 892 questionnaires (valid response rate of 75.72%) that were eligible to be analysed. Of these 892 participants, 360 (40.4%) were male and 532 (59.6%) were female. Their ages ranged from 18 to 23 years ($M = 21.11, SD = 1.30$).

Assessment Instruments

The instruments and items to assess demographic variables (i.e., gender, age, working status, ethnicity, parental education, economic status, sex education, and
sexual behaviour status) were described in Study 2 (Chapter 7) and can be found in the Appendix E. The instruments that assessed general attitude towards condoms, sexual behaviour, risk perceptions, condom use experience, attendance at sex education, sexual assertiveness and all TPB variables (i.e., Attitude towards condom use, Subjective Norm, PBC, and Prior Intention) are described below and can be found in the Appendix F.

As indicated by the TPB, only salient beliefs (i.e., those that first come to mind in response to open-ended questions) are relevant to understanding the behavioural beliefs, normative beliefs and control beliefs. However, as suggested by Hobbis and Sutton (2008), in a large-scale study, not all individual salient beliefs elicited in the preliminary work were utilized in the actual questionnaire. It is common practice that modal (i.e., most frequently mentioned) beliefs were use instead. The scale to assess TPB variables in this study was firstly based and modelled from Wilson et al.’s (1992) study. However, based on the results of focus group discussions reported in Chapter 6, not all Wilson et al.’s original 45 items were used in this study as few items were not mentioned by focus group discussion participants (e.g., “Condoms tend to break or leak”; “Suspecting one’s sexual partner having AIDS, or being suspected by one’s sexual partner of having AIDS, is”). Thus the scale used in this study consisted of 39 items and all items were assessed using 5-points Likert scale.

**Prior Intention to use a condom.** The target behaviour of this study was intention to use a condom on the next sexual encounter. Prior Intention to use a condom was assessed by two similar items: “I intend to ensure my sexual partner or I use a condom in the next sexual encounter” and “I am determined that my sexual partner or I will use a condom in the next sexual encounter” with anchors of
“definitely not” (1) to “definitely” (5). These items were answered using 5-points Likert style scale and item responses were summed. As there were only two items, the inter-item correlation was computed ($r = .82$) instead of Cronbach’s alpha. This high inter-item correlation provided support that the items were measuring the same construct.

To determine which of the beliefs distinguished between individuals who intended to use condoms and those who did not, participants were divided into two groups on the basis of Prior Intention scores. The first group consisted of participants whose score on Prior Intention score was 5 or lower (Non-Intenders) and the second group was composed of participants who scored 6 or greater (Intenders).

**A direct measure of Attitude towards condom use.** Consistent with the target behaviour of intention to use a condom, Attitude towards condom use measured personal evaluation of condom use behaviour. To obtain a direct measure of Attitude towards condom use, a set of eight items, rated on a 5-point Likert scale, was employed. Participants were asked to respond to the statement “I think that if my sexual partner or I use condoms in the next sexual encounter, it is:” by rating a list of cognitive items (i.e., very responsible to very irresponsible; very wise to very unwise; very useful to very useless; very good to very bad; and very safe to very unsafe) and a list of affective items (i.e., very pleasant to very unpleasant; very arousing to very off-putting; and very natural to very unnatural).

This scale was subjected to factor analysis to explore its factor properties (see Table 19, page 157). The Kaiser-Meyer-Olkin (KMO) value was .86 and Barlett’s test of sphericity reached statistical significant ($p = .00$), supporting the factorability of the correlation matrix. Using Varimax rotation, the presence of two components was revealed and they were labelled Cognitive and Affective. Both components had
eigenvalues exceeding 1 and showed a number of strong loadings. All items loaded substantially onto a single factor for each component. The two factor solution explained a total of 72% of the variance. The internal consistency reliability of each of the components was good, being $\alpha = .89$ for the cognitive and $\alpha = .80$ for the affective component.

Although both cognitive and affective components were identified (i.e., multicomponent of attitude), it is important to note that Fishbein and Ajzen have consistently adopted a unidimensional approach to attitude towards a health behaviour (Bagozzi & Burnkrant, 1979). Ajzen (2006) has argued that an overall evaluation of attitude towards a behaviour combines both cognitions and emotions and although they may be separated, they both reflect on attitudes and thus these two components should be combined (Fishbein & Ajzen, 2010). Rhodes, Blanchard, and Matheson (2006) have pointed out that “In TPB research, the main point of measurement interest centres on whether an aggregate attitude construct operationally characterizes attitude as well as two distinct affective (e.g. enjoyable/unenjoyable) and instrumental (e.g. beneficial/harmful) attitudinal constructs” (p. 120). Thus, within the TPB research, the two constructs have typically been combined (Albarracin et al., 2004; Rhodes et al., 2006).

The appropriateness of this option was explored by examining the relationship between the cognitive and affective components. Correlations between the subscales and the overall attitude were very high, $r = .90$ for cognitive aspect and $r = .79$ for affective aspect. In addition, when all items were combined into one scale the Cronbach’s alpha was high, $\alpha = .88$, suggesting that these different dimensions contribute to a single unidimensional attitude. Therefore, it was considered
appropriate to sum the items of the two components into one measure of Attitudes towards condom use.

Table 19

*Factor Structure of Direct Attitude Measure*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>% variance accounted for</th>
<th>Range of factor loading</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive</td>
<td>Responsible/irresponsible</td>
<td>43.3</td>
<td>.75 - .87</td>
<td>.89</td>
</tr>
<tr>
<td></td>
<td>Wise/unwise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Useful/useless</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Good/bad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Safe/unsafe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective</td>
<td>Pleasant/unpleasant</td>
<td>28.7</td>
<td>.41 - .85</td>
<td>.80</td>
</tr>
<tr>
<td></td>
<td>Arousing/off-putting</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Natural/unnatural</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Overall scale α | .88 |

**Measuring Behavioural Belief.** There were sixteen items used to measure beliefs about condom use behaviour. Behavioural Belief is conceptualised in the TPB as the product of Attitude Belief Strength and Outcome Evaluation (Ajzen, 2006). Thus, a measure of Behavioural Belief was formed with two sub-scales: Attitude Belief Strength (or also known as Behavioural Belief Strength) and Outcome Evaluation. Each item on Belief Strength was paired with each corresponding item on Outcome Evaluation. For example, the Belief Strength item “Using condoms would prevent me or my partner becoming pregnant” (with possible answers from “very likely” to “very unlikely”) was paired with the Outcome Evaluation item: “Preventing me or my partner becoming pregnant is” (with possible answers “very good” to “very bad”). In line with the TPB (Ajzen, 2006), the responses from these two items were then multiplied. The resulting products from all pairs were summed to form a measure of Behavioural Belief.
*Attitude Belief Strength*. Eight items were used to measure Belief Strength of Attitude towards condom use. Examples of items were: Using condoms would prevent me or my partner becoming pregnant; Using condoms would protect me from getting a sexually transmitted infection; Using condoms would show my sexual partner I care about his/her health (full list of items can be found in Appendix F). Participants responded to each item on a 5-point Likert rating scale from “very likely” to “very unlikely”.

Principal component analysis (PCA) was conducted on this scale to examine its factorability (Table 20, next page). The KMO value was .72, exceeding the recommended value of .6 (Kaiser, 1974) and Barlett’s test of sphericity was significant ($p = .00$), allowing one to proceed with the rotation. Using Varimax, the presence of two components was revealed and they were named Advantages and Disadvantages of condom use. Both components showed a number of strong loadings, and all items loaded substantially on only one component. The two factor solution explained a total of 67.1% of the variance. Cronbach’s alpha internal consistency coefficient for the Advantages component was $\alpha = .84$ and for the Disadvantages component alpha was $\alpha = .78$. However, based on the factor and reliability analysis, one of the items (i.e. “Using condoms would make sex seem pre-planned”) was dropped due to its low loading (.25).
### Table 20

**Factor Structure of Attitude Belief Strength**

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>% variance accounted for</th>
<th>Range of factor loading</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Prevent pregnancy</td>
<td>39.7</td>
<td>.67 - .92</td>
<td>.84</td>
</tr>
<tr>
<td></td>
<td>Prevent STIs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevent HIV/AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expressing care towards partner's health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Interfere sex</td>
<td>27.4</td>
<td>.63 - .86</td>
<td>.78</td>
</tr>
<tr>
<td></td>
<td>Reduce sexual pleasure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distrust impression</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Overall scale</td>
<td></td>
<td></td>
<td>(\alpha: .79)</td>
</tr>
</tbody>
</table>

**Outcome Evaluation.** An assessment of Outcome Evaluation for use of condoms was obtained using eight items. Examples of items were: Preventing me or my partner becoming pregnant is; Protecting myself from getting a sexually transmitted infection is; Showing my sexual partner I care about his/her health is (full list of items can be found in Appendix F). Participants responded to each item using a 5 point Likert rating scale anchored from “very good” to “very bad”.

Outcome Evaluation also had satisfactory factorability with a KMO value of .76 and the Barlett’s test of sphericity reached statistical significance (\(p = .00\)). Using Varimax rotation, the PCA results paralleled the two factors described for Behavioural Belief - Advantages and Disadvantages. In addition, one item (“Something that makes sex seem pre-planned is”) was dropped due to the low loading of its paired Belief Strength item (i.e. “Using condoms would make sex seem pre-planned”) as described above. Overall, the two-factor solution explained a total of 71.9% of the variance (see Table 21, next page). Cronbach’s alpha was \(\alpha = .82\) for the Advantages and \(\alpha = .83\) for Disadvantages scales.
Table 21

*Factor Structure of Outcome Evaluation Measure*

<table>
<thead>
<tr>
<th>Factor</th>
<th>Items</th>
<th>% variance accounted for</th>
<th>Range of factor loading</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Prevent pregnancy</td>
<td>39.3</td>
<td>.67 - .90</td>
<td>.82</td>
</tr>
<tr>
<td></td>
<td>Prevent STIs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prevent HIV/AIDS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Expressing care towards partner's health</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disadvantages</td>
<td>Interfere sex</td>
<td>32.6</td>
<td>.83 - .87</td>
<td>.83</td>
</tr>
<tr>
<td></td>
<td>Reduce sexual pleasure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Distrust impression</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Overall scale $\alpha : .80$

**Subjective Norm as a direct measure.** One direct item was used to assess how participants perceived significant others’ norm to engage in condom use behaviour. The item was “Most people who are important to me think my sexual partner or I should use condoms next time we have sex” and participants responded on a 5-point response scale ranging from “definitely should” to “definitely should not”. This approach is consistent with Ajzen and Fishbein (1980) and Ajzen (2006) guidelines on TPB questionnaire construction, as well as other TPB researchers (e.g., Agnew, 2000; Cooke & French, 2011; Middlestadt et al., 1995; Peltzer, 2000; Trafimow, 2000), who have used a global measure of subjective norm such as “Most people who are important to me think……”). References to certain specific significant others (e.g., sexual partner, friends) were assessed in Normative Belief.

**Measuring Normative Belief about condom use.** There were four items used to measure Normative Belief about condom use as described further below. The Normative Belief measure, was formed using two sub-scales: Normative Belief Strength and Motivation to Comply. Each item on Normative Belief Strength was
paired with each corresponding items on Motivation to Comply. For example, the Belief-strength item “My sexual partner would approve of our using condoms in the next sexual encounter” (with possible answers from “very likely” to “very unlikely”) was paired with the Motivation to Comply item: “Regarding condom use, I would like to do what my sexual partner thinks I should do” (with possible answers from “very likely” to “very unlikely”). Responses from these two items were then multiplied. The resulting products from all pairs were summed to form the Normative Belief measurement.

**Normative Belief Strength.** Normative Belief Strength was measured with two items: “My sexual partner would approve of our using condoms in the next sexual encounter” and “My friends think using condoms is good”. Both items were rated on 5-point Likert scales anchored by “very likely” to “very unlikely”. As there were only two items, the inter-item correlation was computed ($r = .44$) instead of Cronbach’s alpha (Pallant, 2007).

**Motivation to Comply.** Motivation to Comply to participants’ referent normative beliefs with regards to condom use was measured using two items rated on 5-points scales from “very likely” to “very unlikely”: “Regarding condom use, I would like to do what my sexual partner thinks I should do” and “Regarding condom use, I would like to do what my friends think I should do”. These items had inter-item correlation of $r = .46$.

**PBC as a direct measure.** A direct measure of PBC was obtained using two items rated on 5-point response scales: “Using condoms or not during sex would be up to me” and “Whether my sexual partner and I use condoms or not during sex would depend on me”. They were both anchored from “very likely” to “very unlikely” and had inter-item correlation of $r = .54$. 
**Measuring Control Belief.** Six items were used to measure Control Belief about use of condoms. This measurement was formed with two sub-scales: Control Belief Strength and Control Belief Power. Each item on the Control Belief Strength subscale was paired with each corresponding items on the Control Belief Power subscale. For example, the Belief Strength item “I know where to buy condoms” (with possible answers “strongly agree” to “strongly disagree”) was paired with the Belief Power item: “For me, dealing with the embarrassment of actually buying condoms would be” (with possible answers from “very easy” to “very hard”). The two items may be different but they were related in forming beliefs about the presence of factors that may facilitate or impede performance of the behaviour (Ajzen, 2006). The responses from these two items were then multiplied. The resulting products from all pairs were summed to form the Control Belief scale for use of condoms.

**Control Belief Strength.** Perceived Control Strength over condom use behaviour was assessed with three items rated on 5-point response scales. This measure assessed subjective probabilities that certain control factors will be present such as knowing where to buy condoms, the ability to carry condoms without too much problems and the ability to discuss condom use with a partner. All item responses were anchored from “strongly agree” to “strongly disagree”.

**Control Belief Power.** The Control Belief Power subscale measures the power of control factors that were perceived to facilitate or inhibit behavioural performance. As in the Control Belief Strength subscale, this measure was also obtained using three items rated on 5-point response scales. An example item is “For me, dealing with the embarrassment of actually buying condoms would be” with responses from “very easy” to “very hard”.
As mentioned above, all items from the Control Belief Strength subscale were multiplied by ratings on the equivalent Control Belief Power item and summed to obtain score for the Control Belief measure. Reliability (Cronbach’s alpha) for these scales was $\alpha = .76$ for Control Strength, $\alpha = .74$ for Control Power and $\alpha = .71$ for the combined Control Belief scale.

**General attitude towards condoms.** The 15-item attitude towards condom scale developed by Boldero et al. (1992) based on Brown’s attitude towards condom scale (Brown, 1984) was also used in this research to assess the degree of favourable attitudes towards condom. As an example item, participants were asked to rate “Condoms are hard to use” with anchors of “strongly agree” to “strongly disagree” using a 5-point Likert response format. A factor analysis with Varimax rotation (KMO = .81, Barlett’s test of sphericity = .00) revealed two components of this scale: Benefit or positive attitude and Barrier or negative attitude towards condom. The reliability coefficient was $\alpha = .82$ and $\alpha = .74$ respectively. One item (“To most people, a man who uses a condom is sexier than one who leaves the protection up to a woman”) was dropped from the scale because it detracted from the reliability of the scale.

**Sexual behaviour, risk perceptions and condom use experience.** Items regarding sexual behaviour, risk perceptions and condom use experience were adapted from Hall’s study (1994). This measure asked several questions in relation to the type of sexual activity and condom use behaviour on each occasion of different sexual activity. The sexually inactive group was also asked to answer these questions as a measure of their intention to use condoms in the future for each different type of sexual activity (vaginal, anal, oral, and petting).
There were 16 questions on sexual behaviours, which were based on four types of sexual activity: vaginal, anal, oral and petting. In each sexual activity, participants were asked whether they had performed that specific sexual activity with their boyfriend/girlfriend, regular partner, casual partner and commercial sex workers. An example of item is “Vaginal sex with boyfriend/girlfriend” with three possible answers: “Done regularly, done once or rarely, and never done it”.

Based on responses on the sexual behaviours items, participants who indicated themselves as sexually active were asked to continue the questionnaire that assessed condom use behaviour. There were 12 questions that assessed condom use experience for three types of sexual activity: vaginal, anal and oral sex. In each sexual activity, participants were asked whether they used condoms during the specific sexual activity with their boyfriend/girlfriend, regular partner, casual partner and commercial sex workers. An example item is “Vaginal sex with boyfriend/girlfriend” with four possible answers: “Always used a condom; sometimes used a condom; never used a condom; and never done it”. Participants who were sexually inactive were also asked similar questions as a measure of their future intentions, except that the possible answers were only three: “Will always use a condom; will sometimes use a condom; and will never use a condom”.

Risk perceptions on HIV, STIs and becoming pregnant were assessed by three items on each risk perception. The items were “To what extent do you think you are vulnerable to becoming infected by HIV?”, “To what extent do you think you are vulnerable to a STI (apart from AIDS)?”, and “To what extent are you concerned about (you or your partner) becoming pregnant?” with five possible responses, ranging from “not at all” to “very concerned”. The reliability coefficient was $\alpha = .80$. 
In view of the risk of getting HIV/STIs, participants were also asked whether they would (for sexually inactive participants) or had ever asked their partner about HIV status, STIs and drug experience. In total there were three items, in which the response was to answer “yes” or “no”. If the participant answered “yes” to any of the three questions, they further indicated the type of partners that they have asked (for sexually active participants) or would ask (for sexually inactive participants).

**Receipt of sex education.** Attendance at sex education was assessed by a single closed question, “Have you ever attended/participated in sex education?” with “yes” or “no” as the possible answers. It was then followed by an open-ended question on the frequency of attendance at sex education classes or seminars.

**Sexual assertiveness.** Sexual assertiveness, that is the extent to which a participant is confident that she or he would be able to perform sexually-related behaviour and safe sex, was assessed with 24 items. The 24 items contained all items used in a scale developed by D. Rosenthal, Moore, and Flynn (1991) but also included four additional items to assess assertiveness in STI preventive measures. Each item was rated on a 5-point Likert-scale with anchors from “very confident” to “very unconfident”. Examples of items from the original measure are: “I feel confident that I can refuse a sexual advance from my partner”, “I feel confident that I can choose when and with whom to have sex”, and “I feel confident that I can tell my partner how to treat me sexually”. Examples of additional items that assessed assertiveness in STI preventive measures are: “I feel confident that I can take my sex partner with me to a clinic if I thought I had an STI”; “I feel confident that I can look for STI signs before deciding to have sex with anyone”.

The Cronbach’s reliability coefficient for the total scale was $\alpha = .82$. One item (“I feel confident that I can ask someone other than my partner for a date”) was
dropped from the scale because of a low item-total correlation that detracted from the reliability of the scale.

**Procedure**

Questionnaire 1 Part B was administered as part of Questionnaire 1 and the report of research procedure can be found in Chapter 7 (page 124).

**Results**

**Prior Intention**

As indicated above, participants were divided into two groups on the basis of the Prior Intention scores, Intenders (who intended to use a condom at their next sexual encounter) and Non-Intenders (who did not intend to use a condom at their next sexual encounter). Of the total sample, 74.5% were Intenders and 25.5% were Non-Intenders. Of sexually active participants, 69.0% were Intenders, whilst of sexually inactive participants, 77.0% were Intenders. A chi-square test showed that this difference was statistically significant, \(X^2(\text{df} = 1, N = 850) = 5.41, p = .02\) with significantly fewer sexually active than inactive participants expressing the view that they intended to use a condom at their next sexual encounter.

**Prior Intention to use a condom by gender and sexual activity status**

To examine the first hypothesis, Prior Intention scores were examined in relation to gender and sexual activity status. A 2 (gender: male, female) x 2 (sexual activity status: active and inactive) analysis of variance (ANOVA) revealed a significant effect, \(F(3, 846) = 14.05, p = .00\). The main effect of gender was significant, \(F(1, 846) = 10.54, p = .00\), as was the main effect of sexual activity status, \(F(1, 846) = 8.31, p = .00\). The interaction of these two factors was also significant, \(F(1, 846) = 8.28, p = .00\). Post-hoc comparisons using the Tukey HSD test indicated that the interaction was attributable to a significantly higher intention in the sexually
inactive female group ($M = 7.96$, $SD = 2.41$) when compared to other groups (see Figure 10). Thus, the hypothesis was partially supported, sexually inactive females having significantly higher Prior Intention scores than other groups, but there were no significant difference between Prior Intention scores of males and females who were sexually active.

![Estimated Marginal Means of Prior Intention by gender and sexual behaviour status](image)

**Figure 10.** Estimated marginal means of Prior Intention by gender and sexual behaviour status

**Attributes of Intenders and Non-Intenders**

To examine the second hypothesis, attributes of Intenders to use condoms versus Non-intenders to use condoms, both sexually active and inactive, were compared. Comparison of means using $t$-test was employed as the tool of analyses for each of the belief based measurements of the Theory of Planned Behaviour variables (i.e., Behavioural Belief, Normative Belief and Control Belief). The procedure of comparison was based on Bosompra’s study (2001).

First, Behavioural Belief items were examined. As described in the Measurement section, each item was presented in two forms, one that measured
Belief Strength and the other that measures Outcome Evaluation. The product of Belief Strength and Outcome Evaluation was then determined to provide a measure of Behavioural Belief. In the analyses below, Intenders and Non-Intenders were compared on their means of responses to each item in its Belief Strength form, its Outcome Evaluation form and in the Behavioural Belief form (the product of the two).

As shown in Table 22 (next page), Intenders were significantly more likely than Non-Intenders to believe that using a condom would protect them against pregnancy, $t(302) = 6.69, p = .00$, STIs $t(308) = 5.07, p = .00$ and HIV $t(322) = 4.55, p = .00$, and as an expression of care towards partner’s health $t(297) = 7.36, p = .00$.

On the contrary, Non-Intenders were more likely than Intenders to believe that condoms interfered with the sexual encounter, $t(329) = 2.85, p = .00$, that condoms might be perceived as an indication of mistrust towards a partner, $t(830) = 2.38, p = .01$, and that condoms reduce sexual pleasure, $t(835) = 5.14, p = .00$.

Responses of Intenders and Non-Intenders were then compared on behavioural belief items in their Outcome Evaluation format (Table 22). Both Intenders and Non-Intenders evaluated most of the Outcome Evaluation of advantages of condom in a similar manner (i.e., independent-sample t tests showed non-significant results), except that Intenders evaluated more positively the benefit of condoms in preventing pregnancy, $t(259) = 5.95, p = .00$. However, the Outcome Evaluations of the disadvantages of condom use were evaluated rather differently. Non-Intenders reported significantly more negative evaluations than Intenders on all items: that condoms would interfere with the sexual encounter, $t(825) = -3.45, p = .00$, condoms could create an impression of mistrust, $t(827) = -3.04, p = .00$ and condoms would reduce sexual pleasure, $t(824) = -3.60, p = .00$. Overall, the comparison of Intenders
and Non-Intenders on the Behavioural Belief variable (Strength multiplied by 
Outcome Evaluation) confirmed that the aggregated advantages of condom use were 
evaluated more positively by Intenders than Non-Intenders, \( t(308) = 6.92, p = .00 \). On 
the other hand, the aggregated disadvantages of condom use were evaluated more 
strongly by Non-Intenders than Intenders \( t(296) = -5.54, p = .00 \). Individual \( t \)-test 
result of Behavioural Belief items were presented in Table 23.

Table 22

<table>
<thead>
<tr>
<th>Items</th>
<th>Belief Strength</th>
<th>Outcome Evaluation</th>
<th>Behavioural Belief</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>NI</td>
<td>I</td>
</tr>
<tr>
<td><strong>Advantages:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevent pregnancies</td>
<td>4.21</td>
<td>3.64**</td>
<td>4.56</td>
</tr>
<tr>
<td>Prevent STIs</td>
<td>4.17</td>
<td>3.73**</td>
<td>4.70</td>
</tr>
<tr>
<td>Prevent HIV</td>
<td>4.00</td>
<td>3.59**</td>
<td>4.72</td>
</tr>
<tr>
<td>Care of partner’s health</td>
<td>4.24</td>
<td>3.58**</td>
<td>4.67</td>
</tr>
<tr>
<td><strong>Disadvantages:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interfere sexual encounter</td>
<td>3.30</td>
<td>3.53*</td>
<td>3.61</td>
</tr>
<tr>
<td>Impression of mistrust</td>
<td>3.04</td>
<td>3.27*</td>
<td>3.85</td>
</tr>
<tr>
<td>Reduce sexual pleasure</td>
<td>3.44</td>
<td>3.84**</td>
<td>3.69</td>
</tr>
</tbody>
</table>

I: Intenders ; NI: Non-Intenders ; *p < .05 , **p < .01

Table 23

\textit{t-test Results Comparing Intenders and Non-Intenders on Behavioural Belief Items}

<table>
<thead>
<tr>
<th></th>
<th>df</th>
<th>( t )-test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Advantages:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevent pregnancies</td>
<td>295</td>
<td>7.94**</td>
</tr>
<tr>
<td>Prevent STIs</td>
<td>319</td>
<td>4.28**</td>
</tr>
<tr>
<td>Prevent HIV</td>
<td>825</td>
<td>4.28**</td>
</tr>
<tr>
<td>Care of partner’s health</td>
<td>310</td>
<td>6.75**</td>
</tr>
<tr>
<td><strong>Disadvantages:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interfere sexual encounter</td>
<td>309</td>
<td>-4.17**</td>
</tr>
<tr>
<td>Impression of mistrust</td>
<td>292</td>
<td>-3.63**</td>
</tr>
<tr>
<td>Reduce sexual pleasure</td>
<td>305</td>
<td>-5.64**</td>
</tr>
</tbody>
</table>

*p < .05 , **p < .01
Normative Belief items in Intenders and Non-Intenders were also examined. Intenders and Non-Intenders were compared on their means of responses to each item in its Belief Strength form, its Motivation to Comply form and in the Normative Belief form (the product of the two). As shown in Table 24, Intenders were significantly more likely than Non-Intenders to believe that their partners and friends would approve condom use, partners, $t(326) = 10.28, p = .00$; friends, $t(825) = 11.40, p = .00$. Responses of Intenders and Non-Intenders in their Motivation to Comply format revealed that Intenders were more likely than Non-Intenders to follow their partner’s suggestion to use a condom, $t(312) = 5.00, p = .00$, and to lesser extent their friends’ suggestion, $t(825) = 2.73, p = .01$. The comparison on the Normative Belief variable (Strength multiplied by Motivation to Comply) confirmed the differences between Intenders and Non-Intenders, both for perceived partner’s approval, $t(370) = 8.02, p = .00$ and perceived friends’ approval $t(823) = 5.84, p = .00$.

Table 24

Mean Normative Belief Items of Those Who Did Versus Those Who Did Not Intend to Use Condom

<table>
<thead>
<tr>
<th>Items</th>
<th>Belief Strength</th>
<th>Motivation to Comply</th>
<th>Belief Strength x Motivation to Comply (Normative Belief)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>NI</td>
<td>I</td>
</tr>
<tr>
<td>Partner will approve of condom use</td>
<td>4.03</td>
<td>3.09**</td>
<td>3.48</td>
</tr>
<tr>
<td>Friends will approve of condom use</td>
<td>4.17</td>
<td>3.76**</td>
<td>3.20</td>
</tr>
</tbody>
</table>

I: Intenders; NI: Non-Intenders; *$p < .05$ , **$p < .01$  

Control Belief items of Intenders and Non-Intenders were also examined. Intenders and Non-Intenders were compared on their means of responses to each item
in its Control Strength form, its Control Power form and in the Control Belief form (the product of the two). As shown in Table 25, Intenders were significantly more likely than Non-Intenders to believe that they were able to carry and use a condom \( t(820) = 2.38, p = .01 \). However, Control Belief Strength was low as reflected in the low score of the mean item. Furthermore, analysis of the items in their Control Power format revealed that the Intenders compared to Non-Intenders perceived that they had greater power to communicate about condom use with their partner \( t(307) = 4.83, p = .01 \). The comparison of Intenders and Non-Intenders on Control Belief (Strength multiplied by Control Power) confirmed that perceived ability to communicate with their partner about condom use was the only Control Belief item on which the two groups varied, \( t(324) = 3.03, p = .00 \).

Table 25

Mean Control Belief Items of Those Who Did Versus Those Who Did Not Intend to Use Condom

<table>
<thead>
<tr>
<th>Items</th>
<th>Control Strength</th>
<th>Control Power</th>
<th>Control Strength x Control Power (Control Belief)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I</td>
<td>NI</td>
<td>I</td>
</tr>
<tr>
<td>Buying condom</td>
<td>3.94</td>
<td>3.94</td>
<td>2.69</td>
</tr>
<tr>
<td>Communicate condom use with partner</td>
<td>3.81</td>
<td>3.71</td>
<td>3.70</td>
</tr>
<tr>
<td>Carry and use condom</td>
<td>2.45</td>
<td>2.22*</td>
<td>3.44</td>
</tr>
</tbody>
</table>

I: Intenders; NI: Non-Intenders; *p < .05, **p < .01

To determine which of the significant belief-based items identified above were significant multivariate correlates and differentiated Intenders and Non-Intenders, a logistic regression analysis was conducted. Being an Intender or Non-Intender was the dependent variable and scores on the 27 belief-based items were entered as independent variables. Three items were significant in multivariate correlates: the
Behavioural Belief that condom use prevented pregnancy (i.e., the product of a belief that condom will prevent pregnancy and that preventing pregnancy is good), the Behavioural Belief that using condoms reduced sexual pleasure (i.e., the product of a belief that a condom will likely to reduce sexual pleasure and that less sexual pleasure is bad), and one of Control Power item on communicating condom use with partner (see Table 26). Thus, participants who had (1) higher belief that condom use prevented pregnancy and that preventing pregnancy was good, (2) higher perceived control of ability to communicate condom use with partner, and (3) lower belief that condoms reduced sexual pleasure and that less sexual pleasure was bad, would be more likely to become an Intender.

Table 26

*Results of Logistic Regression Predicting Intenders vs Non-Intenders Based on Significant Belief-Based Measurements*

<table>
<thead>
<tr>
<th>Belief Type</th>
<th>β</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95.0% C.I. for EXP(β)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behavioural Belief of preventing pregnancy</td>
<td>.04</td>
<td>.04</td>
<td>1.04</td>
<td>1.00 - 1.09</td>
</tr>
<tr>
<td>Behavioural Belief of reducing sexual pleasure</td>
<td>-.18</td>
<td>.00</td>
<td>.84</td>
<td>.78 - .89</td>
</tr>
<tr>
<td>Control Power of communicating condom use</td>
<td>.33</td>
<td>.00</td>
<td>1.12</td>
<td>1.04 - 1.19</td>
</tr>
</tbody>
</table>

**Beliefs specific to sexually active participants based on gender and Intender status**

A separate examination of the sexually active group only was conducted to obtain a clearer understanding of underlying beliefs that were important in holding an intention to use a condom in this group (hypothesis 3). A multivariate analysis of variance (MANOVA) was employed to investigate the differences between gender (male versus female) and intender status (Intenders versus Non-Intenders) on
Behavioural Belief Strength, Outcome Evaluations, Normative Belief Strength, Motivation to Comply, Control Belief Strength and Control Power.

Within this sexually active group, there were statistically significant differences between males and females on Motivation to Comply $F(6, 240) = 6.54, p = .00$; Wilks’ Lambda = .86; partial eta squared = .02, and Control Power (partial eta squared = .11). The mean score for the male group was significantly higher than the female group for both Motivation to Comply ($M = 6.83, SD = .16$ for male group and $M = 6.24, SD = .16$ for female group, $p = .01$) as well as Control Power ($M = 12.22, SD = .24$ for male group and $M = 11.63, SD = .24$ for female group, $p = .05$). To assess the effect size of these results, Eta squared was employed and the guidelines of Cohen (in Pallant, 2007) were used (.01 = small, .06 = moderate, .14 = large effect). Based on this classification, of particular note was the difference between males and females on Control Power which showed a large effect size, suggesting that there was a large difference in Control Power between males and females.

Significant differences were also found between Intenders and Non-Intenders on Behavioural Belief Strength, $F(6, 240) = 6.15, p = .00$; Wilks’ Lambda = .87; partial eta squared = .08, Normative Belief Strength (partial eta squared = .10), and Motivation to Comply (partial eta squared = .03). Intenders believed that their significant others would approve of condom use (Normative Belief Strength) and that they were also more likely to have positive views about condom use than Non-Intenders as reflected in Behavioural Belief Strength scores. The effect size of differences between Intenders and Non-Intenders on Normative Belief Strength and Behavioural Belief Strength were of moderate size.
Demographic Variables and Attitudes Towards Condom Use, Subjective Norms, PBC, and Prior Intention.

In this study, to examine hypothesis four which predicted relationships between demographics variables and TPB variables (Attitudes towards condom use, Subjective Norm, PBC and Prior Intention), a MANOVA was used (SPSS output can be found in Appendix H). Demographic variables assessed were gender, age, working status, ethnicity, parental education, economic status, whether received sex education, and sexual behaviour status (i.e., sexually active and inactive). Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance-covariance matrices, and multicollinearity. No serious violations were noted. As predicted, TPB variables differed according to the demographic variables: gender, economic status, sex education and sexual behaviour status. However, other demographic variables which also assessed in this research were: age, working status, ethnicity, and parental education, were not found to differ.

There was a statistically significant difference between males and females on the four variables (i.e., Attitudes towards condom use, Subjective Norm, PBC and Prior Intention) of the TPB: $F(4, 675) = 3.38, p = .00$; Wilks’ Lambda = .98, partial eta squared = .02. Similarly, statistically significant difference were also found between economic status on the variables of TPB $F(16, 2062) = 1.94, p = .00$; Wilks’ Lambda = .95, partial eta squared = .02, as well as sex education on the variables of TPB $F(4, 675) = 2.54, p = .00$; Wilks’ Lambda = .98, partial eta squared = .02 and sexual behaviour status on the variables of TPB $F(4, 675) = 2.72, p = .03$; Wilks’ Lambda = .98, partial eta squared = .02.
A further analysis was performed to examine the nature of the significant differences observed. Subjective Norm scores differed according to gender, $F(1, 663) = 4.60, p = .03$, partial eta squared = .01. A pairwise comparison using Bonferroni adjustment indicated that the mean score of Subjective Norm for the female group ($M = 3.97, SD = .25$) was significantly higher than the male group ($M = 3.79, SD = .25$), with a mean difference of 1.77 ($p = .04$). Prior Intention was also found to vary according to gender, $F(1, 663) = 8.70, p = .00$, partial eta squared = .01. A post-hoc analysis using Bonferroni adjustment indicated that the mean score of Prior Intention for the female group ($M = 8.15, SD = .55$) was significantly higher than the mean score from the male group ($M = 7.44, SD = .55$), with a mean difference of .71 ($p = .00$).

Prior Intention varied according to economic status, $F(4, 663) = 5.0, p = .01$, partial eta squared = .03. The mean score of Prior Intention in upper medium group ($M = 6.95, SD = .58$) was significantly lower than the lower medium ($M = 8.05, SD = .56, p = .00$), medium ($M = 8.02, SD = .54, p = .00$), and high SES ($M = 8.06, SD = .60, p = .02$) groups.

Participants who had received sex education differed significantly on Attitude to use a condom $F(1, 663) = 8.40, p = .00$, partial eta squared = .02. A post-hoc analysis using Bonferroni adjustment indicated that the mean score of Attitude for the group who had received sex education ($M = 31.46, SD = 1.33$) was significantly more positive than the group who had never attended sex education ($M = 30.20, SD = 1.32$) with a mean difference of 1.26 ($p = .01$). Participants who had received sex education were also found to differ significantly on Subjective Norm, $F(1, 663) = 6.90, p = .01$, partial eta squared = .02. A pairwise comparison using Bonferroni adjustment showed significantly higher scores of Subjective Norm in the group that
had attended sex education \((M = 3.99, SD = .25)\) than the group that had never attended sex education \((M = 3.76, SD = .25)\) with a mean difference of .23 \((p = .01)\). Furthermore, Prior Intention was found to differ depending on whether sex education had been received, \(F(1, 663) = 4.79, p = .03\), partial eta squared = .01. The mean of Prior Intention scores indicated that the group that had attended sex education \(M = 7.98, SD = .55\) had significantly higher Prior Intention scores than the group that had never attended sex education \(M = 7.60, SD = .54\) \((p = .05)\).

Finally, Prior Intention differed according to sexual behaviour status (i.e., sexually active or sexually inactive), \(F(1, 663) = 8.36, p = .00\), partial eta squared = .02. A pairwise comparison indicated that the sexually inactive group had significantly higher Prior Intention scores \(M = 8.12, SD = .54\) than sexually active participants \(M = 7.46, SD = .55\), with a mean difference of .66, \(p = .00\).

Although some of the TPB variables varied significantly according to gender, economic status, sex education attendance and sexual behaviour status, the actual differences observed in the mean scores were very small. These were evident in the small effect sizes demonstrated by the partial eta square values ranging between .01 and .03 as described above.

**Predictors of Prior Intention to Use a Condom**

To test the hypothesised model of relationships between TPB variables and Prior Intention, first bivariate correlations between variables were examined. These analyses indicated significant associations between the TPB constructs of Attitudes towards condom use, Subjective Norm, PBC and Prior Intention. As can be seen in Table 27 (page 178), most correlations were significant, both for sexually active as well as inactive participants, with the exception of correlations between PBC and Attitude, Subjective Norm and Prior Intention in sexually active participants, and
between PBC and Control Belief in sexually inactive participants. Prior Intention was strongly correlated with Attitudes ($r = .55$) in sexually inactive participants, while in sexually active participants, Prior Intention was strongly correlated with Subjective Norm ($r = .47$).
Table 27

Correlations Between Prior Intention and TPB Variables

<table>
<thead>
<tr>
<th></th>
<th>Attitude</th>
<th>Subjective Norm</th>
<th>PBC</th>
<th>Behavioural Belief</th>
<th>Normative Belief</th>
<th>Control Belief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>.44**</td>
<td>.47**</td>
<td>.06</td>
<td>.36**</td>
<td>.42**</td>
<td>.16*</td>
</tr>
<tr>
<td>SA</td>
<td>.55**</td>
<td>.45**</td>
<td>.12**</td>
<td>.34**</td>
<td>.32**</td>
<td>.11**</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>.45**</td>
<td>.10</td>
<td></td>
<td>.42**</td>
<td>.52**</td>
<td>.20**</td>
</tr>
<tr>
<td>SA</td>
<td>.46**</td>
<td>.14**</td>
<td></td>
<td>.58**</td>
<td>.49**</td>
<td>.31**</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>.10</td>
<td>.39**</td>
<td>.52**</td>
<td>.16**</td>
<td>.14*</td>
<td>.19**</td>
</tr>
<tr>
<td>SA</td>
<td></td>
<td>.10*</td>
<td>.13**</td>
<td>.08</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

SI: Sexually inactive participants
SA: Sexually active participants

*p<.05, **p<.01
To identify predictors of Prior Intention to use a condom for both sexually active and sexually inactive participants, hierarchical regression analysis was employed. The selection of predictors and the order of entry of predictors into the model were based on past research on condom use using the TPB (Johnston, 1999). As suggested by Field (2006), known or important predictors from other research should be entered into the model first (block 1) in order of their importance in predicting the outcome, followed by less known or important predictors (or other variables to test mediation effects) that should be entered in the next blocks. Furthermore, according to Field (2006), it is possible to select different methods of variable entry for different blocks in a hierarchy. For example, although forced entry is used for the first block (Block 1) or second block (Block 2), a stepwise method can be specified for the third block (Block 3) to explore the effects of predictors with no or little previous research.

The suggested approach described above was used in this analysis examining predictors of Prior Intention. Using the forced entry method, the direct measures of Attitude, Subjective Norm and PBC were entered in Block 1 of the equation since they are the core variables of the TPB. Behavioural Belief, Normative Belief and Control Belief were entered in Block 2 of the analyses because according to the TPB, their influence on intention is supposed to be captured through direct measures of Attitude, Subjective Norm and PBC, and thus the result of this equation was expected to be non-significant. Furthermore, as the main purpose of this research was not to test the model but rather to identify predictors of intention to use a condom (including non-TPB variables), in Block 3 of the analyses, the stepwise method was used to enable exploration. In this last Block, general attitude towards condoms, sexual
assertiveness, past condom use behaviour, and risk perception of STI/HIV and pregnancy were entered.

As can be seen in Table 28 (next page), Step 1 (in which direct measures of Attitude, Subjective Norm and PBC were entered) accounted for 31% of the variance in Prior Intention to use a condom. All three TPB predictor variables entered in the Step 1 were unique significant predictors of intention to use a condom. After controlling for the effects of direct measures, the belief-based measures entered in Step 2 did not contribute significantly to the prediction of Prior Intention to use a condom, as expected. However, the other non-TPB variables that were expected to contribute to the prediction of Prior Intention to use a condom entered in Step 3, did contribute significantly and accounted for an additional 2.7% of variance. Only two variables among the six non-TPB variables entered in Step 3 were unique significant predictors. These were general attitude towards condoms and sexual assertiveness, suggesting that more positive general attitudes on condoms and perceived greater control in sexual interactions predicted Prior Intention. The model as a whole was significant, $F(13, 873) = 34.45, p < .00$. Overall, this model explained 34% of variance in the prediction of Prior Intention to use a condom. Furthermore, this analysis found that the prediction of Prior Intention to use a condom from Attitudes was higher than Subjective Norms, suggesting that, for this particular population, intention to use a condom was influenced largely by participants’ attitudes towards condom use.
Table 28

Hierarchical Multiple Regression Analysis to Predict Intention –All Participants

<table>
<thead>
<tr>
<th>Step</th>
<th>R square</th>
<th>R square change</th>
<th>Adjusted R square</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Step 1</td>
<td>.31</td>
<td>.31</td>
<td>.31</td>
<td>.16</td>
<td>.01</td>
<td>.37**</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
<td>.71</td>
<td>.07</td>
<td>.31**</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.00</td>
<td>.06*</td>
</tr>
<tr>
<td>PBC</td>
<td></td>
<td></td>
<td></td>
<td>.31</td>
<td>.00</td>
<td>.31</td>
</tr>
<tr>
<td>Step 2</td>
<td>.34</td>
<td>.03</td>
<td>.33</td>
<td>.14</td>
<td>.02</td>
<td>.32**</td>
</tr>
<tr>
<td>Attitude</td>
<td></td>
<td></td>
<td></td>
<td>.58</td>
<td>.08</td>
<td>.28**</td>
</tr>
<tr>
<td>Subjective Norm</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.00</td>
<td>.05</td>
</tr>
<tr>
<td>PBC</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.04</td>
<td>.01</td>
</tr>
<tr>
<td>Behavioural Belief</td>
<td></td>
<td></td>
<td></td>
<td>.00</td>
<td>.00</td>
<td>.02</td>
</tr>
<tr>
<td>Normative Belief</td>
<td></td>
<td></td>
<td></td>
<td>.01</td>
<td>.00</td>
<td>.05</td>
</tr>
<tr>
<td>Control Belief</td>
<td></td>
<td></td>
<td></td>
<td>.02</td>
<td>.04</td>
<td>.01</td>
</tr>
<tr>
<td>Sexual assertiveness</td>
<td></td>
<td></td>
<td></td>
<td>.03</td>
<td>.01</td>
<td>.14**</td>
</tr>
<tr>
<td>General attitude towards condom</td>
<td></td>
<td></td>
<td></td>
<td>.03</td>
<td>.01</td>
<td>.08*</td>
</tr>
</tbody>
</table>

Note \( R^2 = .31 \) for Step 1; \( \Delta R^2 = .00 \) for Step 2; \( \Delta R^2 = .03 \) for Step 3*. \*p < .05, **p < .01
A further similar hierarchical regression procedure was employed to examine predictors of Prior Intention to use a condom specifically in sexually active participants. All predictors and hierarchical regression methods were the same as in the previous analysis.

As can be seen from Table 29 (next page), this model had greater predictive power than the model for sexually active and inactive participants combined. Overall, the model was significant, $F(7, 11) = 3.61, p < .05$, and predicted 70% of the variance in Prior Intention to use a condom. Step 1, with two direct variables (i.e., Attitude to use a condom and Subjective Norm. PBC was not entered due to non-significant bivariate correlation with Prior Intention) accounted for 41% of variance. Both Attitude and Subjective Norm were unique significant predictors. Unexpectedly, in Step 2 Normative Belief was a significant predictor and Subjective Norm became non-significant, suggesting that for sexually active participants, the belief-based measure (i.e., Normative Belief) captured social influence better than the direct measure (i.e., Subjective Norm). Although unexpected, this result is not particularly unusual (M. Conner, personal communication, November 13, 2013). Furthermore, the additional variables entered in Step 3 contributed significantly, with a further 15% of variance being taken into account. Of Step 3 variables, only the perceived risk of pregnancy was found to be a unique significant predictor. Details of the results of this analysis are shown in Table 29.
### Table 29

**Hierarchical Multiple Regression Analysis to Predict Intention – Sexually Active Participants Only**

<table>
<thead>
<tr>
<th>Step</th>
<th>R square change</th>
<th>Adjusted R square</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.17</td>
<td>.12</td>
<td>.35*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.88</td>
<td>.45</td>
<td>.42*</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.10</td>
<td>.13</td>
<td>.21*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.21</td>
<td>.60</td>
<td>.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioural Belief</td>
<td>.00</td>
<td>.01</td>
<td>.19</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative Belief</td>
<td>.03</td>
<td>.03</td>
<td>.29*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Belief</td>
<td>.36</td>
<td>.38</td>
<td>.23</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude</td>
<td>.27</td>
<td>.13</td>
<td>.54*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subjective Norm</td>
<td>.15</td>
<td>.51</td>
<td>.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioural Belief</td>
<td>.00</td>
<td>.01</td>
<td>.06</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normative Belief</td>
<td>.03</td>
<td>.03</td>
<td>.30*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Belief</td>
<td>.08</td>
<td>.34</td>
<td>.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pregnancy risk</td>
<td>1.17</td>
<td>.51</td>
<td>.48*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note $R^2 = .41$ for Step 1; $\Delta R^2 = .14$ for Step 2; $\Delta R^2 = .15$ for Step 3*; *$p < .05$, **$p < .01$
Discussion

In support of hypothesis 1, there were differences between males and females who were sexually active or not active on Prior Intention to use a condom. The analyses confirmed that the sexually inactive group had greater intention to use condom than the sexually active group. Females, but only in the sexually inactive group, had greater intention to use a condom than males in their next sexual engagement. Furthermore, the difference between sexually inactive and active females was very large. This finding may suggest an over-confidence within sexually inactive females and perhaps a shifting of belief and behaviours once they become sexually active. However, this possibility needs to be explored further.

The finding that within sexually inactive participants, males’ intention to use a condom was lower compared to females should receive greater attention in light of HIV/AIDS prevention efforts, since other research has confirmed that in Indonesia, condom use is mostly determined by men and that “women have been powerless and becoming the object in the sexual domain” (S. Wulansari, 2009, p. 169). Generally, this role of gender and power dynamics has been recognized as a factor in the increasing rates of HIV infection among women worldwide (Amaro, 1995; Higgins, Hoffman, & Dworkin, 2010; Ulibarri, Raj, & Amaro, 2012; van Devanter, Duncan, Birnbaum, Burrell-Piggott, & Siegel, 2011). Thus, the low intention of males as found in the sexually inactive participant of this study may have the potential to impact on their female partners’ intention to use a condom.

Furthermore, not in accordance to hypothesis 1, the difference between sexually active females and males on Prior Intention was not found, and sexually inactive and
active males had very similar levels of intention to use a condom, suggesting males may be more realistic in their expectations.

Multivariate analysis in this research (Hypothesis 2) suggested that among the Intenders to use condoms, perceived risk of pregnancy, perception that condoms reduced sexual pleasure and skills to communicate condom use, were all important in the establishment of intention. Social cognitive interventions which involve thinking and reasoning, may work in addressing these issues in this young adult Indonesian context, as it has been shown to do among African American adolescents (Carmack & Lewis-Moss, 2009).

It is interesting to learn from this research that within the sexually active group, male participants were more willing to comply with their partners wishes than the female participants (Hypothesis 3). Still within the sexually active group, a belief that important others will approve condom use (together with a positive view on condom use) differentiate Intenders and Non-intenders. Thus, addressing gender issues, power dynamics and relationship interactions between men and women is critical in promoting condom use. Condom use education must be directed to males as much as to females, as males are more likely to interact and influence each other in condom use decisions. Addressing control power issue is also of importance, as females perceived much less control power (such as dealing with embarrassment in purchasing and carrying condoms).

One of the findings related to hypothesis 4 was that females perceived higher social pressure to use condoms – regardless of whether important others actually carried out the behaviour — as reflected in higher Subjective Norm compared to males. Thus, intervention aiming to promote subjective norm in favour of condom use may also be an
effective feature in sex education and other social cognitive interventions (e.g., specific communications in newspaper articles, websites, and other mass media). The importance of sex education was found, supporting hypothesis 4g. Participants who had received sex education compared to those that had not, had more positive attitudes towards condom use, higher positive beliefs on the social norms to use a condom and higher intention to use a condom. This finding suggests the importance of sex education in influencing a positive persuasion towards condom use and other safe sex strategies as well as reduced pregnancy as found by other research in other countries (J. Kirby, van der Sluijs, & Currie, 2010; Mueller, Gavin, & Kulkarni, 2008; Smith et al., 2011).

Finally, in support of Hypothesis 5 and the utility of the TPB, with all participants (both sexually active and inactive), all three direct measures of the TPB variables predicted Prior Intention. The addition of sexual assertiveness and general attitudes towards condoms variables increased the predictive utility of the model. Young people with high sexual assertiveness – that is the extent to which a participant is confident that she or he would be able to perform sexually related behaviour and safe sex — appeared to feel empowered that they could control their own sexual interactions. Sexually assertive beliefs, behaviours and practices – including initiating and influencing a sexual act, refusal of unwanted sexual experience, and performing prevention of pregnancy and STI behaviours — were important components in predicting intention. Additionally, and understandably, a positive attitude towards condoms increased intention to use a condom.

With sexually active participants only, the TPB predictive utility was even higher. However, an analysis of these sexually active participants only, revealed that only Attitude and Normative Belief (a belief-based, indirect measurement of Subjective Norm
with reference to partner and friends) predicted the establishment of Prior Intention, together with perceived risk of pregnancy. This finding confirmed the importance of perceived risk of pregnancy, rather than perceived risk of HIV/STIs, as one of the determinants of condom use behaviour among Indonesian young adults. As there was an absence of a significant contribution of PBC in sexually active participants, it appears that the extent to which condom use can be successfully negotiated is lower once young adults are in the situation of being sexually active. However, this possibility needs to be explored further. Similar to this study with sexually active participants only, Trafimow (2001) also did not find PBC to be an important predictor of intention.

Overall, predictors of intention to use a condom found in this research do not appear to be unique to the Indonesian context. For instance, the influence of gender relations on sexual communication and the subsequent impact on actual condom use have been documented in other research (Bui et al., 2012; Diekman, Goodfriend, & Goodwin, 2004). In traditional sexual scripts, carrying a condom “just in case” is more acceptable to men than women, as evidenced by a study conducted a decade ago in Australia which found that when a woman carry a condom, “all the boys will think you want it" (Hillier et al., 1998). In Canada, Hynie, Schuller, and Couperthwaite (2003) also found that when the woman was carrying a condom, the woman was perceived as more sexually willing. These perceptions may hinder women’s willingness to possess a condom which may influence their ability to practice safe sex. However, in a recent experimental study in the United States (research samples were undergraduate students), it was found that a woman who proposed condom use was not evaluated more harshly than a man, and, in fact, was
seen as less promiscuous when she proposed a condom than when she did not (Broaddus, Morris, & Bryan, 2010).

This recent finding suggested that social norm change is possible and Indonesia could also be in this same situation as long as condom education efforts are performed continuously. Efforts to change social norms to make condom use more acceptable are needed since this will have an impact upon personal norms. As evident in this study, perceived norms (i.e., Subjective Norm and Normative Belief) were also strong determinants of Prior Intention. Trafimow (2001) offered an explanation for the relative importance of Attitudes and Subjective Norm in the condom use behaviour domain. He proposed that perceptions of normative pressure strongly predicted intentions to use condoms when under conditions of normative confidence (i.e., they were confident that they knew what significant others thought that they should do. In other words, they believed that their perceptions were accurate). Otherwise, their attitudes were better predictors of their intentions to use condoms.

Conclusion

The aim of this study was to identify predictors of intention to use a condom amongst Indonesian heterosexual young adult university students. To achieve this aim, the TPB was employed as a guiding theory and some other non-TPB variables were also included. Of particular significance, this study supported the predictive utility of TPB. It was found that Attitudes towards condom use, Subjective Norm and PBC were predictors of Prior Intention to use a condom.

Differences exist between the total sample and sexually active participants. Within the total sample, two event-independent characteristics were found to have
influence on the formation of intention, namely sexual assertiveness and general attitudes towards condom. In analyses including all participants, Attitudes was a stronger determinant of Prior Intention than Subjective Norm. Within sexually active participants, Attitudes was found to be a stronger determinant of Prior Intention compared to the indirect measure of Subjective Norm, suggesting that, in this population, perceptions of the advantages of condom use and the positive outcome evaluation strongly predicted their intentions to use condoms. The significance of Normative Belief as one determinant of Prior Intention suggests that participants who are sexually active are likely to conform to the condom use views and practices of their partner and friends. PBC did not contribute to the formation of intention. Furthermore, perceived risk of pregnancy – but not perceived risks of HIV/STIs — contributed significantly to the prediction of Prior Intention.
Chapter 9

Study 4: From Prior Intention to Intention in Action to Actual Condom Use

This chapter examines predictors of actual condom use in sexually active participants who, within four weeks of completing Questionnaire 1, had engaged in a sexual encounter, specifically sexual penetration. As suggested by many previous researchers into the TRA as well as the TPB, intention is not always transformed into action where condom use is concerned (Armitage & Conner, 2001; Bennetti & Bozionelos, 2000; McEachan et al., 2011; S. Moore & Rosenthal, 2006). Therefore, it is important to investigate factors that directly influence the link between intention to use a condom and the behaviour of condom use so that findings may be used to guide action that promotes condom use.

Consequently, the main purpose of this study was to examine the relationship between Prior Intention to use a condom (i.e., an intention assessed in Questionnaire 1 when participants were asked whether they intended to use a condom in their next sexual encounter), Intention in Action (i.e., an intention to use a condom at the beginning of the particular sexual encounter targeted) and actual condom use behaviour. Importantly, the influence of contextual factors (or event-specific factors: cf. de Visser & Smith, 1999) in relation to condom use decisions was also examined.

The model of predictors of actual condom use to be tested is presented in Figure 7. In this model Prior Intention to use a condom will be predicted by Attitudes, Subjective Norms, PBC in using a condom, perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms. Intention in Action to use a condom will be predicted by Prior
Intention, type of partner, communication with the partner and condom availability.

Actual condom use will be predicted by Intention in Action, level of sexual arousal, alcohol/drug use, and condom availability.

The primary hypothesis of Study 4 was that this model of predictors of actual condom use would be supported. Secondary exploratory analyses were also conducted. In particular, correlates of condom availability and communication with partner about condom use were explored and differences between male and female condom users and non-users examined.

Figure 7. From Prior Intention to Intention in Action to actual condom use – A hypothesised model

Method

As reported in Chapter 7 (Study 2: Psychosocial factors associated with sexual practices and safe sex) and Chapter 8 (Study 3: Predicting Intention), in this research two questionnaires (namely Questionnaire 1 and Questionnaire 2) were completed by each
participant on two occasions (namely Time 1 and Time 2) with a four-week interval between each questionnaire. Responses to both questionnaires were used in this study.

**Participants**

This research used the same participants who were involved in Studies 2 and 3. All participants were university students who agreed to participate in this research and were enrolled in one of eight universities. These universities were all located in Surabaya and were deliberately selected to enable wide demographic and SES differences to be captured in this study.

As described in Chapter 7 and 8, there were 892 valid questionnaires for the purpose of Studies 2 and 3 analyses, in which 289 of them were sexually active. To be eligible to be included in this current study, participants needed to have been engaged in a sexual encounter involving penetration between completing Questionnaire 1 and 2. Although 289 participants were sexually active, only 130 participants indicated they had had a sexual experience of some kind during the relevant time. Of 130 participants, 73 reported sexual activity involving penetration and were included in this study. Their ages ranged from 18 to 23 years ($M = 21.32$ years, $SD = 1.33$).

**Assessment instruments**

As a means for classification, all non-contextual factors were called event-independent factors, while all contextual factors were called event-specific factors (cf. de Visser & Smith, 1999). Questionnaire 2 was used to measure event-specific variables used in this study and only items in Questionnaire 2 are described below. Explanations of event-independent variables (i.e., all TPB variables, demographic variables, risks perceptions, past condom use, sex education attendance, sexual assertiveness and general
attitude towards condom) that were used for statistical analysis in this study can be found in Chapter 8 (page 154-165). All items were developed in English and translated into Indonesian language (*Bahasa Indonesia*) for the actual questionnaire to be distributed to participants. To ensure the validity of translation, a bilingual person (English and Bahasa Indonesia) independent of the research project back-translated and proof-read the questionnaire (see Appendix G). The final draft questionnaire was pilot tested among two groups of Indonesians (*N* = 10) who were undergraduate students at the University of Melbourne to ensure the questions were clear and could be understood.

Questionnaire 2 was designed to assess actual condom use behaviour. There was one screening question asking whether they have had sex between Time 1 and Time 2, “I have had sex (vaginal, anal, oral, or petting) since I completed the Questionnaire 1” with the answer “yes/no”. There were 16 other questions that examined the last sexual experience, which can be classified into questions on type of partner, type of sexual encounter, the intention to have sexual encounter, the influence of alcohol and drugs, level of sexual arousal, intention to use condom, the availability of condom, condom use, condom use experience, reasons for not using condom, communication with partner about condom use, participants’ feelings after their sexual encounter and their intention to use a condom in their next sexual encounter.

**Type of partner** was assessed using a single question, “How would you describe your partner for that sexual encounter?” in which participants could tick one of five choices available: Boyfriend/girlfriend, regular partner, casual commercial sex worker (CSW) partner, casual Non-CSW partner, and others (please specify).
Type of sexual encounter was assessed by the question “Which of the following behaviours best describes what occurred during the sexual encounter (please tick appropriate box or boxes)?”: Vaginal sex, anal sex, oral sex, and/or petting.

The intention to have sexual encounter was also assessed with one item: “Before the sexual encounter, how strong were your intentions to have a sexual encounter with your partner?” with anchors of “definitely not strong (1)” to “very strong (5)”.

The influence of alcohol was assessed with one question, “Were you or your partner”, followed by three available choices: Unaffected by alcohol, moderately affected by alcohol, and strongly affected by alcohol;

The influence of drugs was assessed with one question, “Were you or your partner”, followed by three available choices: Unaffected by drugs, moderately affected by drugs, and strongly affected by drugs.

Level of sexual arousal was assessed by four items. Sample questions were “How sexually attracted were you to your sexual partner?” and “To what extent did you want a sexual encounter with your partner?”. All items were answered using 5-points Likert scale, ranging from “not at all (1)” to “great deal (5)”. The Cronbach’s alpha for this scale was $\alpha = .80$.

Intention to use condom was assessed using one question, “How strong was your intention to use a condom” with anchors of “not at all (1)” to “great deal (5)”.

The availability of a condom was assessed in this research by a straightforward question: “During this sexual encounter did you and your partner have a condom available?” with possible answer of “yes/no”.
Condom use was also assessed with a direct question: “If you and your partner had a condom available during this sexual encounter, did you use the condom?” with possible answer of “yes/no”.

Participants who indicated condom use in their last sexual encounter were asked the following question to assess reasons for using condom: “Which of the following statements best describes what happened (tick appropriate box or boxes)?” with available choices: “I was afraid of AIDS; I was afraid of STI; I was afraid of pregnancy; I was conscious of using it all the time; it made the encounter more pleasurable; it made the encounter less pleasurable; it made the encounter longer; and others (please specify)”.

Reason for not using a condom was asked to participants who did not use a condom in their last sexual encounter. The question used was: “If a condom was not used, which of the following statements best describes the reasons (tick appropriate box or boxes)?”, with available choices: “We trust each other that we are clean; long term relationship and we have never been infected by any STIs; other methods of pregnancy control were used; too drunk or high to think about it; tested/checked for HIV/STIs; don’t know about condoms; forgot; no control over situation; perceived low risk of STIs; perceived low risk of pregnancy; condom was not available; partner did not want to; I don’t like condoms; we don’t like condoms; and other reason (please specify)”.

Communication with partner about condom use was assessed with five questions. One qualifying question assessed whether there was communication about the suggestion to use a use and the nature of this communication (i.e., directly or indirectly, initiated by the study participant or their partner, immediately prior to or long before their last sexual encounter). Participants that answered any options other than “neither my
partner nor I suggested that we use a condom” were classified as communicating about condom use. Furthermore, if there was communication between the participant and partner, the participant was asked to answer four more descriptive questions. One question assessed the perceived difficulty in communicating about condom use with their partner with five possible answers (“extremely difficult” to “extremely easy”) and one question assessed the reaction of the partner after talking about condom use, with three possible answers (“happy”, “neither happy nor unhappy”, and “unhappy”). Similar to the above questions, the other two questions were on perceived difficulty of condom use communication, but in this case, by the partner to the participant, and the reaction of the participant after condom use was raised by their partner. Sample questions were “How easy did you find it to communicate with your partner about using a condom?” with anchors of “extremely difficult” to “extremely easy” and “When you communicated your feelings about using a condom, how do you think your partner felt about the suggestion?” with possible answers ranging from “unhappy” to “happy”. Items were not aggregated but were used individually in the analysis.

**Feeling after sexual encounter** was assessed directly by the question “How was your feeling after this sexual relationship?” with available choices: “Good; bad; OK; used; guilty; happy; and other (please specify)”.

**Intention to use a condom in next sexual encounter** was assessed with the question “During your next sexual encounter, which one of the following statements best describes your intentions about using a condom?” with available choices: “I am very sure that I will use a condom; I am sure that I will use a condom; I am neither sure nor unsure
that I will use a condom; I am sure that I will not use a condom; I am very sure that I will
not use a condom; and I have not thought about whether I will use a condom or not”.

Procedure

Ethics approval to conduct this research was gained from the University of
Melbourne Human Ethics Committee prior to data collection (Appendix B). As
explained in more details in Chapter 7, at Time 1, Questionnaire 1 was distributed to all
students who agreed to participate in this research at the beginning of a class. Before
participants returned Questionnaire 1 into the box, participants were asked to pick up a
copy of Questionnaire 2 that was placed in a sealed envelope that had the same number
code as Questionnaire 1.

Soon after all participants had placed Questionnaire 1 into the box, the researcher
explained about Questionnaire 2. Participants were informed that questionnaires were
numbered in pairs (for each Questionnaire 1 and 2) so they could be matched for data
analysis for the purpose of Study 3 and 4. However, participants were guaranteed that
the assigned number on the questionnaires could not be used to identify participants since
there was no personal identifying information in the questionnaires. All participants were
requested to complete Questionnaire 2 regardless of their sexual activity status. If
participants were sexually active, they were requested to complete the questionnaire soon
after they had a sexual encounter. If they were sexually inactive or sexually active but
did not have a sexual encounter within four weeks, they were asked to give the reasons
for being abstinent. All of the above information together with screening questions was
written on the first page of Questionnaire 2. Participants were encouraged to answers all
the questions honestly, and provided with information should they wish to ask further
questions or file a complaint in relation to this research. At the end of this page, the researcher thanked participants for their participation in this study.

All participants, regardless of their sexual activity status and answers to the questionnaire, were requested to bring Questionnaire 2 back to a specific class in the following month (i.e., Time 2). A date was set, which was always four weeks after Time 1, and participants were asked to write this date on Questionnaire 2. The lecturer was requested to remind their students in their class meeting a week before this date. However, whether this reminder was given was not checked.

At the second class, participants returned Questionnaire 2 to a sealed box. As a token of appreciation for their involvement in this research, they were given a key ring soon after they put their questionnaire into the box. The researcher then concluded the data collection with a debriefing.

**Results**

**Nature of sexual activity**

Of 289 sexually active participants (145 male and 144 female), 45% \( (N = 130) \) reported of having sexual encounter within four weeks after Time 1. Of these participants, 52% reported engaging in vaginal sex, 26% reported petting or non-penetrated sex, 18% oral sex, and 4% anal sex. As this current study specifically examined the actual condom use behaviour, only participants who practiced penetrative sex (i.e., vaginal and heterosexual anal sex) qualified for further analysis \( (N = 73) \). However, due to missing data, data from one participant were eliminated and therefore 72 were included in the present analysis (35 female and 37 male). Of participants who practiced penetrative sex, 77.8% reported having had sex with their girlfriends or
boyfriends, 6.9% with regular partners (commonly known in Indonesia as ‘teman tapi mesra’ or ‘an intimate friend’ or ‘friend with benefits’), 6.9% with commercial sex worker and 4.2% with a casual non-commercial sex worker partner. The other 4.2% reported “others” as their type of partner. In terms of participants’ intention to have a sexual encounter, 15.3% said that they very much wanted to have the sexual encounter, 34.7% said that they wanted to have the sexual encounter, and 22.2% said that they fairly wanted the sexual encounter. As many as 16.7% reported that they only wanted the sexual encounter a little bit, and 11.1% reported that they did not want to have the sexual encounter.

**Actual condom use**

Although it was found in Study 3 (Time 1) that 69% of sexually active participants intended to use a condom in their next sexual encounter (i.e., Prior Intention), a further examination of participants who practiced vaginal or heterosexual anal sex ($N = 72$) in their actual next sexual encounter (Time 2) revealed that among this group, 63.9% had Prior Intention (Time 1; participants were classified to have Prior Intention if their score on Prior Intention was equal to or greater than 6 up to maximum of 10. See Chapter 8), but Intention in Action (an intention to use a condom at the beginning of the particular sexual encounter targeted, reported in Time 2) was reduced to 54.1%. (Participants were classified as having Intention in Action if their score on Intention in Action was equal to or greater than 3 up to maximum of 5. See Chapter 8). Among participants, 23.6% ($N = 17$; 6 female and 11 male) had a condom available and only 19.4% ($N = 14$; 6 female and 8 male) actually used a condom in their last sexual encounter.
Examination of reasons for using a condom revealed that the three most common reasons were: fear of pregnancy (48%), to avoid STIs (28%) and to avoid HIV/AIDS (12%). Participants that did not use a condom in their last sexual encounter were also asked to provide reasons for this and the two most frequent responses were: “we trust each other that we are clean” (38%) and “perceived low risk of pregnancy” (35%).

In term of suggesting condom use, most participants (54.4%) reported that “neither my partner nor I suggested that we use a condom”, followed by “it was them (i.e. the participant) who first suggested directly and indirectly using a condom to their partners” (33.3%), and “it was their partner who suggested condom use” (5.3%). A few others reported that “we just knew that we wanted to use a condom” (5.3%) and “I already knew that my partner wanted to use a condom” (1.8%).

It is interesting to note that among male condom users, all but one (this one participant cited “because we knew that we wanted to use a condom already”) reported that they (the participant) suggested directly to their partner to use a condom as opposed to only 50% of female condom users who directly suggested to their partner to use a condom. Among non-condom users who did communicate, the most cited content of communication both for males (20%) and females (33.3%) was “I suggested indirectly that we use a condom to my partner”. Moreover, although most participants did not suggest condom use to their partners, among those participants who did communicate, 60% of them perceived that communicating about condom use to their partners, and by the partner to the participant (55.6%), was an easy business. Overall, the average perception of difficulty was quite high for participants to suggest condom use to their partner ($M = 3.75, SD = 1.09$) and by the partner to the participant ($M = 3.67, SD = 1.10$).
However, statistically significant differences in perceived difficulty communicating about condom use between men and women ($t(42) = .49, p > .05$) and between condom users and non-condom users ($t(42) = .36, p > .05$) were not found.

When asked about feelings after the sexual encounter, most participants said they felt “good” (37%), “happy” (20%), and “OK” (15.5%), but some felt “guilty” (18.5%), “used” (5%), and “bad” (4%). After Time 2 (i.e., last reported sexual encounter) only 22% of participants were “very sure” and 19% were “sure” that they would use a condom in their next sexual encounter; 19% were “unsure” and 27% reported that they had not really thought about whether they would use a condom in their next sexual engagement. The others were “confident” (5%) or “very confident that a condom would not be used” (8%) in their next sexual engagement.

**Test of hypothesised model**

It was initially planned to assess the model using Structural Equation Modelling (SEM). However, SEM is a large sample technique, and even path analysis is greatly affected by the sample size of the study (Craig, n.d.; Lei & Wu, 2007). In this study, although 130 participants engaged in a sexual encounter between Time 1 and 2, only 72 reported having had vaginal and/or anal heterosexual sex and provided all relevant data and thus were able to be included in this study. Consequently, the sample was considered inadequate for path analysis. Instead, in light of the sample size limitation, multiple regression and logistic regression analyses were used to identify predictors first of Prior Intention to use a condom and Intention in Action to use a condom, and then finally actual condom use.
Power analyses were performed to identify the ideal minimum sample size required first for these analyses. The variables to be entered into each of these analyses were those that had a significant bivariate association with the relevant outcome variable. According to the G*Power program (Faul, Erdfelder, Buchner, & Lang, 2009), in order to achieve power of .80 to detect a medium effect size when alpha is set at .05, when five variables are entered into a multiple regression analysis as relevant for Prior Intention to use a condom, was estimated to be 92. For eight variables as in prediction of Intention in Action, the estimated minimum sample was 109. In relation to the logistic regression, G*Power indicated that in order to achieve power of .80 to detect a medium effect size when alpha is set at .05, when variables are entered into a logistic regression as in the case for actual condom use, the sample required was 174. As the sample of participants who reported having had penetrative sex was lower than this, especially in the case of the logistic regression for actual condom use, findings from these analyses need to be interpreted cautiously. In addition, Adjusted R Square has been reported in light of the small sample size as recommended by Pallant (2007).

**Identification of correlates to be entered into the models.** As a first step in the analyses, correlates of Prior Intention, Intention in Action and actual condom use were identified. Correlations between all variables included in Figure 7 are provided in Table 30. Pearson product-moment correlations were used with interval data while Spearman’s correlations were used with ranked categorical data. As can be seen in Table 30 (page 204), Prior Intention was correlated with Attitude towards condom use ($r = .38, p < .01$), Subjective Norm ($r = .43, p < .01$), condom communication (i.e., having communication
about condom use with partner) \( (r = .32, p < .01) \), general attitude towards condoms \( (r = .35, p < .01) \), age \( (r = -.24, p < .05) \) and Intention in Action \( (r = .32, p < .01) \).

Intention in Action was positively associated with communication with partner about condom use \( (r = .52, p < .01) \), Prior Intention \( (r = .32, p < .01) \), condom availability (having a condom available) \( (r = .30, p < .01) \), Subjective Norm \( (r = .28, p < .05) \), ever having had STI symptoms \( (r = .39, p < .01) \), past condom use \( (r = .29, p < .05) \), mother’s education \( (r = .32, p < .01) \) and ultimately condom use \( (r = .41, p < .01) \).

Actual condom use was significantly and positively correlated with communication with partner \( (r = .42, p < .01) \), Intention in Action \( (r = .41, p < .01) \), condom availability \( (r = .72, p < .01) \), as well as with Prior Intention \( (r = .28, p < .05) \), Attitude towards condom use \( (r = .33, p < .01) \), Subjective Norm \( (r = .29, p < .05) \), ever having had STI symptoms \( (r = .28, p < .05) \), father’s education \( (r = .24, p < .05) \) and mother’s education \( (r = .32, p < .01) \).
| Variables | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Condom Use | 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Intention in Action | .41** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Prior intention | .28* .32** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Condom Availability | .72** .30** .12 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Condom Communication | .42** .52** .32** .38** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sexual Assault | -.05 .07 -.20 .20 .06 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Type of Partner | -.08 .19 -.05 .06 .14 .10 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Alcohol Use | .00 -.14 .04 -.16 -.10 -.12 -.24* 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Drugs Use | -.08 -.13 .10 .09 -.12 -.18 -.17 .59** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Attitude-Condome | .33* .22 .38** .18 .22 .18 -.02 .15 .04 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Subjective Norm | .28* .28* .43** .19 .28* .09 -.07 -.08 .07 .37** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PBC | -.04 .14 .09 -.01 .11 .09 -.08 .03 .17 -.05 .14 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HIV/AIDS risk perception | -.17 -.14 -.15 -.02 -.02 -.05 .15 .34** .13 -.13 -.18 .13 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STI risk perception | -.18 -.17 -.10 -.02 .03 -.13 -.13 .35** .13 -.15 .18 .91** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Pregnancy risk perception | -.10 .21 .19 .04 .02 .07 .36** .06* .01 .17 .23 .11 .08 .25** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sexual Assertiveness | -.15 -.16 .07 .01 -.16 -.06 .03 -.17 .17 .06 .01 .00 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Attitude toward condoms | .09 .13 .35** .05 -.04 .04 .04 .05 .41** .23** -.14 -.11 -.12 .18 .37** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ever diagnosed of STI | -.08 -.04 .03 .11 .03 .04 .09 .05 -.03 .00 .03 .12 .12 .02 .10 -.14 -.11 .01 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ever had STI symptoms | .28* .39** .17 .11 .35** .00 .02 .14 .04 .21 .14 .10 -.07 .11 .07 -.27* -.27** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Contraception non-condon | -.04 .11 .05 -.10 .01 .15 -.06 -.05 .00 .15 .03 .01 -.11 .08 .19 -.28* -.24* .25** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Past Condom Use | .23 .29* .07 .35** .16 .20 .18 .03 -.12 .33** .16 -.12 -.02 -.04 .20 .02 .21 .01 .15 07 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of sex partners | .11 .11 .03 .03 .10 .22 -.12 .28** .02 .16 .10 .09 .08 .07 -.19 -.16 .07 .46** .33** .23 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Religiosity | .19 .11 .23 .00 .08 .09 .13 .10 .07 .07 .02 -.18 .01 -.09 .05 .02 .05 .09 .08 .13 -.12 -.13 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Attending sex education | .16 .18 .08 .23** .12 .15 .07 .13 .06 .26* -.19 -.07 .09 .23* .17 .11 .15 .05 .08 .18 .01 -.03 .04 -.09 .13 .12 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Status of economic | .21 -.03 -.04 .23 .08 .22 .19 .02 -.02 .11 -.05 .14 .03 .07 .04 .00 .00 -.01 -.07 -.02 -.18 .17 .16 .12 .26* 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Father's education | .24* .11 .10 .26** .06 .32** -.03 -.14 .19 -.03 .04 .02 -.09 .11 .17 .10 .23* -.13 .07 .07 .30* .04 -.13 .31** 1.99 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mother's education | .32** .32** .13 .36** .29** .10 .30** .37** .15 .08 -.11 .09 -.14 .22** -.12 .14 .22 .03 .22 .26* .06 .03 .27** 10 .36** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Ethnicity | .03 -.05 .16 -.04 .04 .08 .14 .01 .02 .04 .08 .07 .11 .06 .15 .07 .12 -.13 .09 .06 .22 .05 -.17 -.03 .24** .16 .13 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Working status | .10 .21 .07 -.19 .01 .02 .02 .04 .15 -.11 .09 .10 .07 .05 .07 .00 .06 -.11 .04 .22 .23 .17 .08 .28** .00 .07 .03 -.24** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Age | .07 .00 .24** .06 .04 .10 .09 -.07 .04 -.30** .08 .13 .10 -.10 .28* -.25** .03 .03 .25** -.02 .14 .01 .07 .03 -.09 .14 .31** 1.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sex | .06 .04 .03 .15 .18 .20 .05 -.05 .16 .18 .16 .05 .06 .25* .06 -.02 .14 -.33** .09 .16 .16 .02 .05 .25* .09 .14 .20 .05 .05 .22 .08 .07 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
Evaluation of the hypothetical model of determinants of actual condom use. Examination of the model of actual condom use was conducted in three steps, first examination of predictors of Prior Intention, then predictors of Intention in Action and finally predictors of actual condom use.

**Prediction of Prior Intention.** To assess the combined contribution of predictor variables to Prior Intention, previously identified significant bivariate correlates were entered in two steps. In the first step, previously identified significant TPB variables were entered: Attitude towards condom use and Subjective Norm. In the second step, all other significant bivariate correlates of Prior Intention were entered into the equation. These were condom communication, general attitude towards condoms, and age.

The full model accounted for 21.5% of the variance of Prior Intention, Adjusted $R^2 = .215$, $F(2, 69) = 10.72, p < .01$. The Adjusted $R^2$ for Step 1 was significant, and as can be seen in Table 31, both Attitude towards condom use and Subjective Norm made significant unique contributions to the model. However, none of the variables entered through stepwise procedure in Step 2 were included in the regression equation, suggesting that none of the possible additions made a statistically significant improvement in $R^2$.

Table 31

*Multiple Regression Analysis to Predict Prior Intention*

<table>
<thead>
<tr>
<th>R square</th>
<th>R square change</th>
<th>Adjusted R square</th>
<th>B</th>
<th>SE</th>
<th>β</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
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<tr>
<td>Attitude</td>
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<td>.05</td>
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<tr>
<td>Subjective Norm</td>
<td>.72</td>
<td>.24</td>
<td>.33**</td>
<td></td>
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</table>

*p < .05, **p < .01*
**Prediction of Intention in Action.** To examine predictors of Intention in Action, variables entered in the first step were the same as those in the first step of previous analysis: Attitude towards condom use and Subjective Norm. In Step 2, variables entered were Prior Intention, communication with partner about condom use and condom availability. In the third step, all other significant bivariate correlates of Intention in Action were entered into the equation. These were past condom use, ever having had STI symptoms, and mother’s education.

The full model accounted for 31% of the variance of Intention in Action. The Adjusted $R^2$ for Step 1 was significant, Adjusted $R^2 = .07$, $F(2, 69) = 3.62$, $p = .03$, but none of the variables entered made significant unique contributions to the model. The Adjusted $R^2$ for Step 2 was also significant, Adjusted $R^2 = .26$, $F(5, 66) = 6.03$, $p < .01$, and as can be seen in Table 32 (next page), only communication with partner about condom use was an independent predictor of Intention in Action. The Adjusted $R^2$ for Step 3 was also significant, Adjusted $R^2 = .31$, $F(6, 65) = 6.11$, $p < .01$. As can be seen in Table 32, variables that made significant unique contributions to the model were ever having had STI symptoms ($p < .05$) and communication with partner about condom use ($p < .01$).
Table 32

*Multiple Regression Analysis to Predict Intention in Action*

<table>
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<tr>
<th></th>
<th>R square</th>
<th>R square change</th>
<th>Adjusted R square</th>
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<th>SE</th>
<th>β</th>
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<td>.23</td>
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<tr>
<td><strong>Step 2</strong></td>
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<td>.12</td>
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<tr>
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<td>.06</td>
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<td>.23</td>
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*p< .05, **p< .01
**Prediction of Actual Condom Use.** The variables entered into Step 1 of the logistic regression examining predictors of actual condom use were Attitude towards condom use and Subjective Norm (i.e., predictors of Prior Intention). The variables entered in Step 2 were Prior Intention and communication with partner about condom use. In Step 3, condom availability and Intention in Action were entered into the equation. In the final step, all other significant bivariate correlates of condom use were added: ever having had STI symptoms, father’s education and mother’s education.

Step 1 was statistically significant, indicating that the predictors (Attitude towards condom use and Subjective Norm) as a set did distinguish between condom users and non-users, $X^2 = 11.11, df = 2, p = .004$. However, as seen in Table 33 (page 210), only Attitude towards condom use was significant. At Step 2, the Omnibus test of model coefficients was also significant, indicating that the predictors (Prior Intention and communication with partner about condom use) as a set reliably distinguished between condom users and non-users, $X^2 = 8.14, df = 2, p = .017$. However, communication with partner about condom use was the only significant predictor of condom use as can be seen in Table 33. In Step 3, a test of the model against a constant only model was statistically significant, indicating that the logistic model fit the data closer than the intercept-only model, $X^2 = 28.08, df = 2, p < .01$. However, only the condom availability variable was significant. The inclusion of demographic variables (i.e., parental education) and ever having had STI symptoms in Step 4 did not add significantly to the model and were removed from the regression equation. A test of the full model against a constant only model was also statistically significant, $X^2 = 47.33, df = 6, p < .01$. 
Nagelkerke’s $R^2$ of .769 indicated a strong relationship between prediction and grouping. Prediction success overall was 97.2% (85.7% for using a condom and 100% for not using a condom), an increase from 80.6% for the constant only model. The Wald criterion demonstrated that condom availability made a significant contribution to prediction ($p = .00$) but not Intention in Action as previously expected. Following the argument of de Visser and Smith (1999), this logistic regression analysis may be unreliable due to the strong relationship between condom use and condom availability. This is reflected in the large odds ratios and confidence intervals for the measure of condom availability. The small sample and low numbers of participants who had a condom available ($N = 17$) and actually used a condom ($N = 14$) could also contribute to these results.

In summary, an individual with a positive evaluation about using a condom and a perception that people important to that individual think that condoms ought to be used, will be more likely to have a general intention (i.e., Prior Intention) to use a condom. Furthermore, an individual who communicates with his/her partner about condom use and has previously had STI symptoms will be more likely to have an immediate intention to use a condom before a specific sexual engagement (i.e., Intention in Action). In the analysis examining actual condom use, it was found that an individual with positive evaluation about using a condom will be more likely to have a general intention to use a condom. However, this general intention was not found to have a direct effect on Intention in Action. Instead, it was communication with partner that had a direct effect on Intention in Action. Yet, finally, Intention in Action was not translated into actual condom use behaviour. This study found that it was condom availability that had a direct effect on actual condom use behaviour.
Table 33

**Results of Logistic Regression to Predict Actual Condom Use**

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>Model 1</th>
<th></th>
<th>Model 2</th>
<th></th>
<th>Model 3</th>
<th></th>
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<td>SE</td>
<td>OR</td>
<td>B</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Constant</td>
<td>-8.136</td>
<td>* 2.5</td>
<td>.00</td>
<td>-8.584</td>
<td>* 2.833</td>
<td>.00</td>
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<tr>
<td>Attitude towards condom use</td>
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<td>.166</td>
<td>.10</td>
<td>1.18</td>
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<td>1.53</td>
<td>0.117</td>
<td>.34</td>
<td>1.12</td>
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<td>Condom Communication (1)</td>
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<td>1.1</td>
<td>.26</td>
<td>.31</td>
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<td></td>
<td>5.149</td>
<td>** 1.51</td>
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(1): Based: No

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Variables associated with condom availability

As a prerequisite for condom use, condom availability can also be conceived of as being indicative of intentions to use condoms (Boldero et al., 1992; Jellema et al., 2013; Kashima et al., 1993; Yzer, 2008). Given the importance of condom availability to condom use, correlates of condom availability were examined.

Other than positive correlations with Intention in Action \( r = .30, p < .01 \) and communication with partner about condom use \( r = .38, p < .01 \), condom availability was also correlated with past condom use \( r = .35, p < .01 \), attending sex education \( r = .23, p < .05 \) and two demographic variables: father’s education \( r = .26, p < .05 \) and mother’s education \( r = .36, p < .01 \).

Variables associated with condom communication

As condom communication was found to be an important variable in this Study, correlates of communication about condom use with partner were examined. Other than positive correlations with condom use \( r = .42, p < .01 \), Intention in Action \( r = .52, p < .01 \), Prior Intention \( r = .32, p < .01 \) and condom availability \( r = .38, p < .01 \), communication about condom use with partner was also associated with Subjective Norm \( r = .28, p < .05 \), ever having had STI symptoms \( r = .35, p < .01 \) and mother’s education \( r = .29, p < .05 \).

Differences between male and female condom users and non-condom users

As gender differences in safe-sex behaviours have previously been reported, for instance in Australia (Newton, Newton, Windisch, & Ewing, 2013), differences between male and female condom users and non-users were also explored in this study. Males who used a condom in the last sexual encounter perceived greater risk of pregnancy than the women \((t(11.43) = 2.39, p = .03)\), and women who used
condoms reported higher sexual assertiveness compared to men who used condoms \( (t(12) = 2.30, p = .04) \).

Compared to men who did not use a condom, men who did use a condom:
came from an educated family as reflected in higher father’s education \( (t(35) = 2.00, p = .05) \) and mother’s education \( (t(35) = 2.09, p = .04) \); perceived a greater risk of pregnancy \( (t(35) = 0.70, p = .01) \), perceived a greater risk of an STI \( (t(33.97) = 1.99, p = .05) \) and were more likely to have had STI symptoms \( (p = .02; \) Fisher's exact test). Furthermore, they had more positive Attitude towards condom use \( (t(35) = 1.98, p = .05) \), higher Intention in Action \( (t(35) = 2.60, p = .01) \), higher condom available \( (t(35) = 5.25, p < .01) \), and higher levels of communication about condom use \( (t(35) = 4.10, p < .01) \).

Compared to women who did not use a condom, women who did use a condom: came from a higher SES background \( (t(33) = 2.35, p = .02) \); had had a lower number of sexual partners \( (t(28.00) = 2.86, p = .01) \); had ever attended sex education \( (t(8.46) = 2.20, p = .05) \); and perceive a lower risks of HIV/AIDS \( (t(32.07) = 2.11, p = .04) \). Furthermore, they had higher Prior Intention \( (t(33) = 2.11, p = .04) \), Intention in Action \( (t(33) = 2.56, p = .01) \), Attitude towards condom use \( (t(33) = 2.02, p = .05) \), Subjective Norm \( (t(33) = 2.31, p = .03) \), and having condom available \( (t(5.44) = 4.69, p = .00) \). No difference was found between groups on condom use communication \( (t(33) = 1.27, p = .21) \).

**Discussion**

Characteristics of condom users in this sample were initially explored. However, the main aim of this study was to find predictors of actual condom use in Indonesian context as illustrated in Figure 7. As the sample size was smaller than expected regression analyses were used to examine predictors of actual condom use in
an exploratory manner. The model was partially supported. Prior intention to use a condom was predicted by Attitude towards condom use and also Subjective Norms regarding condom use (i.e., an individual's perception of whether people important to the individual think that condom use behaviour should be performed). Intention in Action was predicted by communication about condoms and ever having had STI symptoms but although, correlated with intention in action, Prior Intention was not a unique predictor in this analysis. Finally, in the models examining predictors of actual condom use highlighted the importance of having positive attitudes about condom use, communication with partner about condoms and most importantly condom availability.

Further exploratory analyses identified that the main correlates of condom availability were communication with partner about condoms, past condom use, having attended sex education and higher parental education. The correlates of condom communication were condom availability, subjective norms about condoms and ever having had STI symptoms. Condom use differed for women and men, with condom using men having greater concern about pregnancy and STIs, and coming from a more highly educated family, than condom using women. Women condom users on the other hand, were from a higher socioeconomic status, were more likely to have attended sex education and reported higher sexual assertiveness than condom using males. Finally, a range of differences in attitudes were observed between male condom users and non-users, female condom users and non-users, and male and female condom users.

This study found that 23.6% of participants who practiced heterosexual penetration (i.e., vaginal and anal sex) had a condom available the last time they had sexual penetration and 19.4% of the participants used it. This figure is comparable to
data in other countries, for instance in an Australian study, approximately 20% of adult respondents used a condom the last time they had vaginal intercourse (de Visser, Smith, Rissel, Richters, & Grulich, 2003). However, other data from rural Australian adolescents showed that as many as 47.5% of sexually active adolescents reported that they had always used a condom in the last six months (Jenkins & McLaren, 2003) and a study among heterosexual tertiary students in Australia showed that 60% used a condom in their most recent sexual encounter (de Visser & Smith, 1999). A more recent study reported that 64.2% of Year 12 Australians used a condom at their most recent sexual encounter (Smith et al., 2009). Compared to these data, and even compared to a study using a similar university sample many years ago in Australia in which condom availability and condom use were 79.2% and 65.3% respectively (Boldero et al., 1992), condom use in young adult Indonesian students is low. The low rate has been confirmed by other studies, such as a survey of Indonesian high school students in six cities over the period 2007-2009 which also reported low rates (below 20%) of consistent condom use (UNICEF Indonesia, 2012).

As indicated by the TPB, having positive attitudes about condoms appeared to play an important role in having a general intention to use a condom and indeed to actually use one. A similar finding was reported in a research that compared the predictive value of the TPB in university students in South Africa and the United States. This study found attitude predicted intention more strongly in the American sample (Heeren, Jemmott, Mandeya, & Tyler, 2007). Another study in the United States reported positive attitudes towards condoms as the single most consistent predictor of condom use (Manlove, Ikramullah, & Terry-Humen, 2008a). This finding implies that promoting positive attitudes towards condom use is needed and should be provided to Indonesian young adults through instilling beliefs supporting
condom use. The benefits of using a condom and the costs associated with non-condom use should be highlighted in the intervention programmes. Greater attention should be paid to the nature of condom perceptions within the framework of the relevant social context such as condoms reducing sexual pleasure; lack of responsibility, love, intimacy and trust; fear of losing one’s reputation (Broaddus et al., 2010; Mash, Mash, & Villiers, 2010).

A variable not specifically indicated by the TPB which appears to be especially important in determining actual condom use in this sample is communication about condoms between partners. The importance of communication in condom use decision making has been documented in many studies across different samples and cultures (e.g., Boldero et al., 1992; de Visser & Smith, 1999; Hadley et al., 2009; Halpern-Felsher, Kropp, Boyer, Tschann, & Ellen, 2004; Noar, Carlyle, & Cole, 2006; Schroder, Johnson, & Wiebe, 2009; Xiao, 2012). Recently, for example, the frequency of communication with partner about safe sex and condom use was found to be a significant partial mediator of both the proportion of condom-protected sex acts and consistent condom use among African American adolescent females (Sales et al., 2012). Despite the significant role of communication in condom use behaviour, this current study found that almost 40% of participants who used a condom felt that communicating about condom use with their partners was not an easy business. One possible explanation is that in an environment in which a sexual relationship outside marriage is not approved, as in Indonesia, talking about condoms also means accepting going against broader community values.

As a skill, communication can be targeted for interventions to increase condom use negotiation and thus the likelihood of condom availability and condom use behaviour. However, as mentioned earlier and noted by a number of researchers
(e.g., Boer & Mashamba, 2007; de Visser, 2005; de Visser & Smith, 1999; Langen, 2005; Pulerwitz et al., 2002), suggesting condom use is often not only about communication skills per se, but also about the dynamics of gender and power that often influence the negotiation position. It may, in particular, be applicable to the Indonesian context whereby the unequal power relations between men and women render the latter inadequate to negotiate for safe sex (UNFPA Indonesia, n.d.; I. D. Utomo et al., 2009). The bivariate correlation analysis showed that being male in this research was associated with higher PBC, and that being female was associated with lower sexual assertiveness. Interestingly, condom using women reported higher sexual assertiveness than condom using men. Furthermore, although the sample size of condom users in this research was limited, it is interesting to note that all men who directly suggested condom use, did in fact use a condom, as opposed to men who only indirectly suggested condom use who mostly did not actually use a condom in their most recent sexual encounter. Broaddus et al. (2010) in their study have demonstrated that perceptions of acceptance of condom use have largely been based on the “how” (method) rather than the “what” (content) was communicated. Thus, mastering effective communication skills both for men and women could also be an important factor in improving actual condom use and should be targeted in intervention programmes.

In the final regression analysis in this research, condom availability was the only independent predictor of condom use behaviour found. However, as mentioned above, this may be unreliable due to the strong relationship between condom use and condom availability variables. Condom availability, which can be perceived as being indicative of intentions to use condoms as well as a necessary behavioural condition, therefore needs greater attention. According to the results of this research,
communication with partner about condom use, having attended sex education, past experience of using condoms and mother’s education were related to condom availability.

The association between communication with partner and intention to use a condom or condom use has been widely examined (Noar & Edgar, 2009), but the link between communication with partner and condom availability has not been a major research area. It is not clear, for instance, whether it was communication with partner that led to condom availability or condom availability that led to communication. This study, however, was not designed to examine this relationship. Similarly, the effect of having attended sex education on condom availability needs further research, in particular in relation to condom seeking behaviour.

Past experience of using condoms as a variable related to condom use behaviour, (i.e., directly influencing condom use or indirectly through intentions or condom availability), has been found in other research which has suggested that participants who had previous experience using a condom were familiar with the information and resources needed to carried out this behaviour and were more likely to do it again (Carmack & Lewis-Moss, 2009; Kashima et al., 1993; Lugoe & Rise, 1999). Kashima et al. (1993) argued that “when behavioural conditions including the availability of a condom and an agreement with the partner to use it were satisfied, intention interacted with past behaviour to predict actual behaviour” (p. 227). Although this research found significant correlations between condom availability, communication with partner, intentions and past behaviour of condom use – all the predictors found in the Kashima et al. (1993) research — the modelling cannot be conducted in this study due to the small sample size of condom users.
The nature of the relationship between mother’s education and condom availability was unclear, but it is not a unique finding, as research elsewhere has found mother’s education to be associated with abstinence and higher self-efficacy for safe sex (Kao & Carter, 2013; Laflin, Wang, & Barry, 2008). It could be that higher level of mother’s education leads to more openness and communication between mother and participants. It has been well documented in behavioural research that mother-adolescent communication about condoms is associated with greater skill in communicating about sex, greater comfort in communicating about sex, and a more favorable endorsement of condoms (Amoran & Fawole, 2008; Miller & Whitaker, 2001). This, however, presents a challenge in the Indonesian context since most parents in Indonesia feel uneasy talking about sex issues with their children (I. D. Utomo, 2003).

Additionally, similar to the finding of this study, previous research in the United States among college age women samples has also identified that the experience of having had STI symptoms predicts intention to use a condom (van Eyll & van Wyck, 2010). Unfortunately, this may be too late to provide protection against lifelong conditions. Clearly more prevention efforts are needed to educate young people to use condom as prophylaxis for STI since most condom use campaigns were perceived by young people as more for contraception or HIV/AIDS prevention, which could be perceived as something very distant by most young people (de Visser, 2005; de Visser & Smith, 2001b).

From a theoretical perspective, this study supports Turchik and Gidycz (2012) recommendation that the inclusion of additional non-TPB variables will allow for more variance to be accounted for in the model when endeavouring to understand sexual risk behaviours. From a practical perspective, this study shows the potential
contribution of social cognitive based-interventions to modify young people’s attitudes, social and subjective norms, and improving communication skills with partner. Progressive gender roles, where both women and men have equal access and opportunities, should also be systematically targeted in the intervention programmes (I. D. Utomo et al., 2009). Interventions that engender greater changes in attitudes, norms and communication with partner skills, will be likely to produce greater impacts on intentions and ultimately actual condom use behaviours.

Finally, although there is no agreed upon “gold standard” in terms of the best way to assess condom use (Noar, Cole, & Carlyle, 2006), the small sample size of condom users in this Study must be highlighted as a major limitation and therefore findings from these analyses need to be interpreted cautiously. It is notable that stepwise procedures were used in the regression analyses as an exploratory approach looking for non-TPB predictors in this research, and this may inflate the probability of Type I error (false positive results) (Whittingham, Stephens, Bradbury, & Freckleton, 2006). However, this research has the particular strength of having employed a two stage design, in which the second assessment has enabled a very recent sexual encounter to be recalled. Being about a recent and specific sexual encounter, data are likely to be fairly accurate, improving the validity of findings.

**Conclusion**

The main purpose of this study, guided by the TPB, was to examine the relationship between Prior Intention, Intention in Action and actual condom use behaviour. Importantly, the influence of event-specific variables or contextual factors (i.e., type of partner, level of sexual arousal, use of alcohol and/or drugs, communication with partner, and condom availability) in relation to condom use decisions were also examined.
In general, direct relationships between Prior Intention, Intention in Action and actual condom use behaviour were not found, although all bivariate analyses showed strong correlations amongst them. Overall, although the predictive utility of the TPB in predicting actual condom use behaviour through intention was not supported in this research – which may be affected by the small sample size — the use of the TPB as the guiding theory and the inclusion of additional variables have enabled this study to provide a better understanding of condom use behaviour amongst Indonesian young adult university students.
Chapter 10
Discussion

The purpose of this research was to gain a greater understanding of safe sex behaviour among heterosexual Indonesian young adult university students. In doing so, this research was divided into four studies. The first two focused on the cultural and psychosocial context of sexual relationships and safe sex behaviour, whilst the latter two studies focused on identifying the determinants of intention to use a condom and ultimately actual condom use. The TPB was used as a guiding theory to identify the determinants of intention to use a condom and actual condom use.

Summary of Findings

Study 1 used qualitative data and was designed to explore issues related to sexual behaviours, and safe sex in particular, in unmarried young adult university students in Indonesia. The main aim of this research was, through a series of focus groups, to explore young adult male and female, Javanese and Chinese Indonesian perceptions of attitudes and behaviours regarding sexual relationships and condom use in unmarried young adults in Indonesia. Study 1 confirmed that sex before marriage is becoming accepted as a reality amongst university students. A number of observations support this view. Sexual activity before marriage was widely, though by no means universally, regarded as quite common. While not specifically endorsing sex before marriage for themselves, many young participants believed their peers were sexually active. A similar finding was reported in Iran, an Islamic country, where abstinence until marriage is more likely to be practiced in traditional families (Mohtasham et al., 2009). However, as in Iranian society, Indonesia is changing rapidly (Situmorang, 2003a; The Lancet, 2013) and traditional family structures, values, and norms may not sufficiently protect adolescents from STIs and
HIV infection. If liberal attitudes and beliefs such as these are held, an actual increase in related behaviours is likely and safe sex interventions in urban Indonesia need to be guided by this reality.

Consistent with research findings elsewhere (Joshi & Chauhan, 2011), sexual desire, curiosity, and love (mostly mentioned by females), were the most common reasons given for participants to engage in sex before marriage. The sexual act as a ‘proof of love’ or because females are worried that their boyfriend would break off their relationship if they refuse to be sexually involved, as found in this study, often puts females in a disadvantaged position as it creates an imbalance in power and, thus, reduces the female voice in the negotiation of sex and safe sex (MacPhail & Campbell, 2001). Curiosity was also found to be a main reason for adolescents to engage in pre-marital sex in the recent Indonesian Adolescent Reproductive Health Survey (2013), suggesting that the common misconception that sex education will encourage adolescents to have sex before marriage (Parker & Nilan, 2013) is probably not true, and on the contrary, there is a need to actually provide adolescents and young adults with sex education. Furthermore, results in this study indicated that many young Indonesians have poor knowledge about STIs and preventive strategies. STI prevention programmes need to provide extensive and reliable information to increase relevant knowledge. Indeed, this research suggests that, in many aspects, Indonesian young people have similar sexual attitudes to young people in Western countries, but differences between Indonesian and Western cultures appear to be especially notable in respect to knowledge relevant to STI prevention.

Study 2 was largely a descriptive quantitative questionnaire study that examined psychosocial factors related to young adult university students’ sexual behaviour in Indonesia. The aim of this study was to extend understanding of sexual
behaviour and beliefs of young adult heterosexual university students in Indonesia. This information is needed to inform policy development by policy makers as well as to assist in the design and monitoring of strategies and programmes developed for young adults with regard to sexual and reproductive health. This study found that knowledge of HIV transmission was low and therefore increasing knowledge in this area should be one of the main priorities in policy and programme development.

Study 2 was guided by six main research questions about sexual experiences, peers’ sexual behaviours, predictors of being sexually active, perceived risks of HIV/STIs and pregnancy, experience of condom use and knowledge about HIV transmission. Of particular interest, factors that were associated with the decision not to become sexually active were found in this study. The significant predictors of not being sexually active were gender (females being more likely than males), working status (not working being more likely than working), socioeconomic status (lower socioeconomic status being more likely than higher) and religiosity (more religious being more likely than less religious). Regular prayers and involvement in religious activities still appear important in decreasing the likelihood of sexual encounters among young people in Indonesia, although the effect was small. The finding that religiosity was associated with sexually related decisions was consistent with the findings of Study 1, that most participants who expressed beliefs in the importance of abstinence believed that they were still bound by religious and social norms and were also afraid of the risks associated with sex before marriage, such as losing virginity and pregnancy. Contrary to beliefs held widely by the Indonesian authorities and religious leaders, this study confirms that attending sex education is not associated with an individual being more sexually active.
Among sexually active participants, perceived risk of STIs and HIV/AIDS was very low. Less than 6% of participants believed that they were at risk. Risk of pregnancy, however, was perceived to be high with more than 37% of female participants and more than 22% of male participants believing that they were at risk. These findings are also in line with the qualitative findings of Study 1, in which participants believed that the prevalence of STI/HIV is very low in Indonesia and they did not believe that they would be infected by STIs/HIV as they were young, did not have many partners, and believed they could differentiate between a ‘clean’ and ‘dirty’ partner. Less than 10% of participants reported always using a condom in their sexual intercourse. Furthermore, confirming findings in Study 1, knowledge about HIV transmission was poor. The average mean of correct answer was only 3.36 where the scale ranged from 0 to 8.

Study 3 used the TPB as a theoretical framework to understand predictors of safe sex practices in unmarried heterosexual young adult university students in Indonesia. To establish a comprehensive understanding of intention to use condoms in the Indonesia context, the TPB categories were used together with additional variables specifically relevant to the Indonesian social context. Study 3 used quantitative questionnaire data collected at the same time as data for Study 2. This research considered intention to use a condom at two separate times: Prior Intention (the focus of this Study 3) and Intention in Action (the focus of Study 4).

The first aim of Study 3 was to examine differences in Prior Intention to use a condom between males and females and level of sexual activity. It was found that there was a significantly lower intention in males than females in Prior Intention to use a condom. The sexually active group was also found to have significantly lower Prior Intention than the sexually inactive group (69%). Further analysis indicated that
this was attributable to a significantly higher intention in the sexually inactive female group. Of sexually active participants, 16% were engaged in risky sexual behaviour (i.e., sex with non-regular partners, including commercial sex workers) where ideally safe sex should be practiced.

The hypothesis that Attitudes, Subjective Norms, PBC, and Prior Intention to use a condom will vary in relation to gender, age, working status, ethnicity, parental education, economic status, sex education, and sexual behaviour status (i.e., sexually active and inactive) was confirmed. Of these demographic variables, gender, economic status, sex education and sexual behaviour status were associated with TPB variables. In relation to Attitude about condom use, having received sex education was associated with a more positive attitude than never having received sex education. For Subjective Norm, females reported slightly higher levels of Subjective Norm than males. Subjective Norm was also found to differ significantly according to sex education attendance with those who had attended sex education having higher Subjective Norm than those who had never attended sex education. Prior Intention varied according to four demographic variables: gender (females had higher Prior Intention than males), economics status (upper medium class had lower Prior Intention than other socioeconomic groups), sex education (participants who received sex education had higher Prior Intention than those who had not) and sexual behaviour status (sexually inactive participants had higher Prior Intention than sexually active). However, although gender, socioeconomic status, sex education attendance and sexual behaviour status were significantly different on some of the TPB variables, the actual differences in the mean scores were very small.

The last hypothesis in Study 3 stated that Prior Intention to use a condom would be predicted by TPB variables (i.e., Attitudes, Subjective Norms, and PBC),
perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour, sexual assertiveness, and general attitudes towards condoms. This hypothesis was partially supported. Hierarchical multiple regression analysis confirmed that formation of Prior Intention among all participants (sexually active and sexually inactive) was predicted by Attitude towards condom use, Subjective Norms and PBC. This finding suggested that (1) more positive or favourable attitudes toward condom use, (2) a belief that their partners and friends would approve condom use in their sexual encounters, and (3) a sense of control in performing condom use behaviour, were associated with greater likelihood of Prior Intention to use a condom.

Furthermore, Attitude was found to have stronger predictive power for Prior Intention than Subjective Norm and PBC. The addition of sexual assertiveness and general attitudes towards condoms variables increased the predictive utility of the model.

With sexually active participants only, the predictive utility of the TPB variables was even higher. However, an analysis of these sexually active participants revealed that only Attitude and Normative Belief influenced the presence or not of Prior Intention, together with perceived risk of pregnancy. The absence of a significant contribution of PBC in sexually active participants can be interpreted to indicate that the extent to which condom use can be successfully negotiated was lower once participants were in the situation of being sexually active. Furthermore, unlike findings in the total sample of participants in which the influence of Attitudes was higher than Subjective Norm, in the sexually active participants only, Normative Belief (an indirect measure of Subjective Norm) was found to be a stronger predictor than Attitudes, a result that has been found in other studies (Armitage & Talibudeen, 2010; Jeong, Jo, Jung, & Lee, 2012). Theoretically, the attitudinal component of the theory is conceived as personal (i.e., internal) in nature while subjective norms reflect
external social influence (Fishbein & Ajzen, 1975; Hee Sun, 2000). Thus, this
difference might have arisen due to the fact that in reality, sexually active participants
often needs to negotiate or rely on their partners’ intention to use a condom, an
interaction between conforming to the condom use views of their partner and friends,
and motivation to comply with such views.

Study 4 was prospective in design and a continuation of Study 3. The sample
in this study was sexually active participants who practiced penetrative sex as the
main purpose of Study 4 was to examine the relationship between Prior Intention to
use a condom, Intention in Action and actual condom use behaviour. The influence
of contextual or event-specific factors in relation to condom use decisions was also
examined. This study was guided by three hypotheses: that (1) Prior Intention to use
a condom will be predicted by Attitudes, Subjective Norms, PBC in using a condom,
perceived risk of HIV/STIs, perceived risk of pregnancy, past condom use behaviour,
sexual assertiveness, and general attitudes towards condoms; (2) Intention in Action
to use a condom will be predicted by Prior Intention, type of partner, communication
with the partner and condom availability; and that (3) actual condom use will be
predicted by Intention in Action, level of sexual arousal, alcohol/drug use, and
condom availability.

The hypotheses of this study were partially supported. Prior Intention to use a
condom was predicted by Attitude towards condom use and Subjective Norms but not
PBC. Intention in Action was predicted by communication about condoms and ever
having had STI symptoms but although, correlated with Intention in Action, Prior
Intention was not a unique predictor in this analysis. Finally, the models examining
predictors of actual condom use highlighted the importance of having positive
attitudes about condom use, communication with partner about condoms and, most importantly, condom availability.

Currency of the Findings

The fieldwork and initial data analyses for this research were conducted in 2001-2004. As some time has now passed, it is important to consider the currency of the research findings before further discussion of findings and their implications.

In Indonesia, the present research would still appear to be extremely relevant. According to UNAIDS (2012), in the last decade, the global landscape of HIV epidemics has changed, for the better in most countries, especially in sub-Saharan Africa. Countries are making historic gains towards ending the AIDS epidemic: there were 700, 000 fewer new HIV infections across the world in 2011 than in 2001 (UNAIDS, 2012). In Asia and Oceania and Nepal, new HIV infections have been reduced by 91% and in Cambodia by 88%. Four countries that account for large numbers of people living with HIV in the region – India, Myanmar, Papua New Guinea and Thailand — have reduced new HIV infections by more than 50% and neighbouring Malaysia’s new infections have dropped by 34%. However, the epidemic has significantly increased in Bangladesh, Philippines, Sri Lanka and Indonesia (UNAIDS, 2012). Indonesia is also one of only 30 countries in the world, where 9 out of 10 people have an unmet need for HIV treatment (UNAIDS, 2012). The main mode of HIV transmission is still through unprotected heterosexual intercourse (Directorate General of Communicable Disease Control and Environmental Health, 2013). All of these indications suggesting that in Indonesia, there have been few changes in safe sex behaviours and that there is a strong the need for behavioural change prevention and intervention, as well as access to HIV treatment. Lessons learned from successful countries in reducing the number of new
HIV infections have taught that prevention did lead to behaviour change and treatment did reduce a person’s viral load (UNAIDS, 2012).

Another issue that needs to be examined in relation to currency of the research findings is whether the religious values have changed in a major way during the intervening period, especially Islam as it is the major religion in Indonesia. There is conclusive documentation that Indonesia has experienced an Islamic resurgence over the last 30 years which is becoming more evident in the daily life (Howell, 2001; Nilan, 2008; Parker & Nilan, 2013; Rosyad, 2007; Smith-Hefner, 2005). The revival has translated into many political agendas and religious practices, both at the “outer” level (lahiriah), such as growing numbers of musholla (prayer room found in public spaces, for instance in offices, shopping malls, airports, and other sites), growing numbers of Islamic-oriented activities on the university campuses, increasing popularity of veil wearing (called jilbab in Indonesia), increasing usage of Islamic greetings, increasing numbers of Islamic book publishers, increasing numbers of youth engaging in radicalism; and at the “inner” level (batiniah), which is a spiritual expression that translates into behavioural change to become a better person (inward change) (Eliraz, 2004; Howell, 2001; Muhammad & Pribadi, 2013).

There has been particular discussion about the possible, sometimes contradictory, reasons for jilbab wearing (e.g., Nef-Saluz, 2007; Nilan, 2008; Parker & Nilan, 2013; Rowe, 2009; Webster, 2010). Among the reasons proposed there is tension between views expressed. On one hand, jilbab wearing has been proposed to be a symbol of religious values on the other, a fashion accessory; a personal choice reflecting a choice of a puritan life or a need to comply with peer social norms or in some instances to comply with a compulsory dress code made by schools and universities; a statement of choice to value Islamic teaching of not showing aurat
(nakedness) or a need to protect oneself from males who usually show more respect to jilbab wearers. Thus, although wearing a jilbab can be interpreted as a reaction to Western cultural influences (with its associations with ‘free sex’, alcohol and drug use and less self-control behaviour in general) and a choice to become more pious, it can also be interpreted as a new pop culture within contemporary Indonesian youth, thus a hybridisation of local Indonesian traditions, Western influences and Islamic teachings (Nef-Saluz, 2007; Nilan & Feixa, 2006). Taken together, these factors suggest that there is the possibility that religious attitudes may be more influential in safe sex decisions now than a decade ago, but the extent of this is hard to assess in Indonesian university students and there are a range of other interpretations of social changes.

In an attempt to understand radicalism and pop culture among contemporary Indonesian Muslim youth, Muhammad and Pribadi (2013) concluded that Islamisation of the public sphere in Indonesia is characterised by mobilisation, radicalisation and pop culture. In spite of this, urban young people in Indonesia nowadays can still act in public as if there was no Islamisation. For instance, it is not an uncommon sight at any Circle K or Seven Eleven convenience store to see a group of youths – males and females — freely drinking alcoholic drinks outside the stores, except during the Ramadan (a month of fasting, considered as a holy month for Muslims). Magazines and tabloids showing women in sexy poses can also still be obtained easily, even by the under-aged, as most of them are available in many newsstands and sold at a cheap price (see Figure 11, next page).
One of the most popular online news portals in Indonesia, detik.com, has also published an online magazine that caters for males (MALE: MAteLElaki, which literally means “male eyes”) which often presents sexy female pictures (see Figure 12, next page). Anyone can download the magazine without any membership. Thus, although an anti-pornography law was passed by the Indonesian parliament in 2008 and there were occasions where hard-line Muslim organisations, such as Front Pembela Islam (Islamic Defenders Front), raided night clubs and discotheques and were behind the closure of the Indonesian Playboy magazine, the daily life of the majority of Indonesians is relatively similar to ten years ago, in term of availability and access to resources related to sexuality issues.
As can be inferred from the discussion above, understanding Islam in Indonesia is a complex issue and certainly beyond the scope of this thesis. It is clear that the Islamic revival has had an impact on Indonesian young people but the extent to which this has influenced attitudes towards pre-marital sex among young people nowadays is relatively uncertain. Furthermore, even if attitudes change in favour of abstinence, this may not automatically be translated into actual behaviour. Reputable research such as the Adolescent Reproductive Health Survey has shown that acceptance of pre-marital sex has been low in Indonesia, as shown in the 2007 and 2012 surveys (Badan Pusat Statistik & Macro International, 2008b; Statistics Indonesia et al., 2013). However, the same surveys reported that there had been an increase in the proportion of males who reported actual sexual intercourse experience, from 6.4% in 2007 to 8.3% in 2012. The proportion of females who reported having
had sexual intercourse, however, decreased, from 1.3% in 2007 to 0.9% in 2012. The decrease was fully attributed to the number of females who lived in rural areas who chose to remain abstinence, while the reported percentage of urban females who had had sexual intercourse was unchanging (0.9%) between 2007 and 2012. The 2012 Adolescent Reproductive Health survey also found that 24% of females and 19% of males personally know someone who had an aborted pregnancy. This proportion is three times higher than that reported in the 2007 Indonesian Young Adults Reproductive Health Survey (8% and 6%, respectively) (Statistics Indonesia et al., 2013). Thus, in urban adolescents, it appears there has been a small increase in actual sexual intercourse experience indicating the continued importance for understanding attitudes associated with condom use.

Attitudes towards pregnant high-school students continue to be harsh and uncertain. Most will be expelled from school if students get pregnant or they may be allowed to continue to study but be unable to sit the National Exam. Although the Indonesian constitution states that education is a citizen’s basic right, the Ministry of Education reportedly has said that due to decentralisation of National Examination to the provincial level, the decision whether to allow a pregnant student to sit the exam is up to the Head of Education agency at the provincial and municipal level (Sirait, 2014). As a comparison, students who are in jail are allowed to sit the National Exam (Surya Online, 2014). Another worrisome trend is related to the possibility of legislation against pre-marital sex. The Indonesian government has passed on to the Parliament a draft of a new penal code which includes an article that people who have committed pre-marital sex could be jailed up to five years, and an article that an unmarried couple who lives together is punishable by up to one year jail time (Gates, 2013). This will certainly have a serious impact on young people’s sexual health. If
this law is passed, it is predicted that the availability and access of reproductive health services for young people will be even more difficult. Sexually active young people will be silent as they are at risk of being prosecuted.

All of the above points clearly indicate that research into safe sex behaviours among Indonesian young adults is still current and highly relevant. While recognising the complexity and heterogeneity of sexual behaviours, it is very important to understand this particular behaviour as it may provide knowledge to inform policy development and intervention programmes in order to promote safe sex behaviours among Indonesian young adults. Further, although there have been some social and cultural changes over recent years, there is little reason to think that sexual attitudes or activity have changed greatly in young Indonesian university students, suggesting the research findings are relevant today.

**Discussion of Findings and Practical Implications**

It is important to consider the findings of this research in light of previous research and to consider their practical implications. Although the number of participants who reported vaginal sex was relatively small, it may be expected that the number will increase as this trend is being observed in other countries, even in more Islamic countries such as Iran (Mohtasham et al., 2009) and Malaysia, a neighbour country of Indonesia (Wong, 2012). The declining age of puberty and the increasing age at marriage has created a growing period in which young people may engage in pre-marital sexual relations (Joshi & Chauhan, 2011). Denial of this reality by Indonesian authorities either by rejecting this phenomenon or by stigmatizing young people as fans of ‘free sex’ (*seks bebas*) has reduced the effectiveness of public health messages about safe sex especially among unmarried young people. The aim of public health messages needs to be to create a social norm amongst young people that
condom use is a normal part of a sexual relationship. A perception of the presence of a social norm of this kind is more likely to increase the personal choice of Indonesian young adults to use a condom in their sexual engagements.

This is an urgent public health issue since only a very small proportion of participants who practiced vaginal sex reported always using a condom (7.8%). Although many participants cited fear of pregnancy as one of the main reasons to practice safe sex, the use of contraception methods other than condoms was also very rare as it was difficult to obtain effective alternatives and considered too risky to store and/or use them, due to their unmarried status. This situation has made condoms a better choice, although buying condoms is not always an easy business. In the Indonesian context, it is perceived to be inappropriate for a young (unmarried) female to purchase condoms, which leaves them dependent on their male partners, even if they want a condom to be used. Again, public health campaigns that directly target the social norm about the acceptability of condoms are needed. A social marketing message such as “if it’s not on, it’s not on” that was used in Australia (Commonwealth Department of Human Services and Health, 1991) in the early days of condom promotion could be a model. It could be adopted in the Indonesian context with local adjustment, in particular labelling and packaging it as education, rather than a campaign, being potentially viewed as a mass publicly directed effort that might attract negative media publicity, so that the message can be accepted and productive. Often, a campaign will face public resistance. A recent National Condom Week campaign sparked national controversy and the programme was halted due to pressure from the public that the government was promoting promiscuity (Sagita & Laia, 2013). It is expected that raised awareness is likely to create a norm
of social acceptability of condom use that in turn will create a non-threatening environment in which young people can suggest, negotiate or buy condoms.

As mentioned above, holding an intention to use a condom among sexually active as well as sexually inactive participants was related to Attitude towards condom use and Subjective Norm (including Normative Belief). This finding again has relevance for public health approaches in Indonesia. Together with education to make condom use an accepted social norm, the advantages of condom use should also be promoted through social marketing. Social marketing is the systematic application of marketing concepts and principles based on evidence and experience to achieve a specific behavioural change believed to be of social value (J. French, Merritt, & Reynolds, 2011). An example of a social marketing project was the “Safe Sex No Regrets” campaign (http://www.safesexnoregrets.com.au) conducted by the Western Australian government to reduce the risk of HIV and STI transmission through promoting the use of condoms amongst sexually active people. A recent systematic review and meta-analysis that examined the effects of condom social marketing on condom use in developing countries showed a positive effect on increasing condom use, and all individual studies showed positive trends, and over numerous years the effect could be substantial (Sweat, Denison, Kennedy, Tedrow, & O’Reilly, 2012).

In regards to social marketing to increase the acceptability of sex education and to make safe-sex seeking behaviour a social norm, Indonesia must consider the use of the Internet and social media as it has been used in other countries, for instance in Turkey, which is also an Islamic country (Purdy, 2011). As described in this thesis, Indonesia is very sensitive about issues related to sexuality. Sexual behaviour before marriage is often linked to ‘Westernisation’ and religious issues by political and religious leaders, thus making it difficult to conduct social marketing openly.
However, the booming of the Internet in Indonesia provides a window of opportunity for outreach and tailored health messaging to unmarried young adults. Based on Indonesian Communication Ministry data, at end of June 2011, there were 45 million Internet users in Indonesia, with 64% or 28 million users between the ages of 15 and 19 years old. According to a Yahoo Net Index survey released in July 2011, Internet use in Indonesia sat in the second row after television and around 89% of Internet users connected to social networking, 72% web browsing and 61% read the news. Furthermore, based on TNS (Kantar Group) research published in May 2011, Indonesia has the world's second largest number of Facebook users and the third largest number of Twitter users (Wikipedia, 2011). With this situation, in which an enormous number of young people go online and are connected to social networking, social marketing using the Internet to increase the acceptance of safe sex is viable.

An informative non-biased website such as www.sti.health.gov.au could be a model where many young adults can find comprehensive information on STIs transmission, condom use and finding a clinic and other resources at their convenience without being worried about social sanctions. Another interactive website was set up in the United States where, for a targeted campaign (college-age students and older teens) entitled “Safe sex happens. Be proud to wear protection”, young people can anonymously “check in” their recent use of condoms, a functionality similar to Foursquare or Facebook, where other users then can see the dots in the map representing the many users of condoms (www.wheredidyouwearit.com). In Mozambique, DKT International has a Facebook page with more than 10,000 members, providing information on appropriate contraceptive methods and has linked interested women to clinics where they can have an IUD inserted (Purdy, 2012). In Indonesia, the “Fiesta” condom brand has
started to use Facebook, Twitter and YouTube to talk about safe sex and condom use. Animated videos were used with the tagline: “Safety Can be Fun”. Not all contents were related to safe sex and condom use. For example, on the Twitter page, a recent sex tip reads: “Nicotine restricts penile blood flow and weakens erections” (Purdy, 2012). Internet chat rooms were also commonly used in an effort to reduce HIV risk behaviour (Ybarra & Bull, 2007). Studies have also found that mobile phone text messages (SMS) can be used successfully for short-term behaviour change (Gold, Lim, Hellard, Hocking, & Keogh, 2010), as shown by the impact of text messaging for sexual health promotion in young people in Victoria, Australia, and the use of SexINFO in the United States and mHealth in Uganda, where its technology, designed by the Google and Grameen Technology Center, provided automated searches of an advice database on safe sex topics requested by users via SMS (Jamison, Karlan, & Raffler, 2013; Ybarra & Bull, 2007).

Although promising, however, the effectiveness of website and social networking sites has not been comprehensively evaluated due to its relatively recent development, constant evolution and the vast majority of activities in this field being unreported in the scientific literature (Gold et al., 2011). A recent evaluation of the mHealth programme, an initiative to improve access to sexual health information in Uganda, found that it did not increase knowledge or shift behaviour to less risky sexual activities (Jamison et al., 2013). Thus, “more work is needed to understand what elements of social media are compelling, how network membership influences effects, and whether linking social media to clinical and social services can be beneficial” (Bull, Levine, Black, Schmiege, & Santelli, 2012, p. 571). Furthermore, in Indonesia, the massive use of the Internet and social media has led to a new moral
panic over this technology (Lim, 2013), which may potentially affect the effectiveness of the Internet as an intervention media to promote safe sex.

The pattern of relationships between Prior Intention, Intention in Action and actual condom use behaviour among sexually active Indonesian young adults is quite different compared to research findings in other countries (Boldero et al., 1992; Bryan, Kagee, & Broaddus, 2006; Turchik, 2010). One of the crucial factors found to predict condom use in this research was communication with partner. Communication, however, is not always easy as this subject often has implications about trust between two parties. Within the context of romantic love, condom use may imply mistrust, and unsafe sex is often seen as a statement of one’s love (Kirkman et al., 1998).

The most crucial factor predicting condom use found in this research was condom availability. Having a condom available, however, is not always easy for Indonesian young people. From a gender perspective, femininity is often regard as passivity and submissiveness, while masculinity is linked to activity and potency (de Visser & Smith, 1999). Thus, by social standards, it is unusual for females to talk about condoms. Furthermore, the condom seeking behaviour is often dependent on their male partners as many unmarried young females are reluctant to purchase condoms. To address this issue, Indonesian authorities should consider providing vending machines where young people, including females, can easily buy condoms. Another practical approach is for supermarkets and convenience stores to put condoms near the cashier so it would be easier for young people to pick them up and pay which is now starting to happen in major cities like Jakarta, Surabaya and some other major cities. Making condoms more available and accessible is one of the most
important implications of the findings of this study, as condom availability was the ultimate variable that led to actual condom use behaviour.

Research findings in Western countries have confirmed that previously in their countries, obtaining and carrying condoms among young people was also perceived as difficult. For example, in Australian research many young people reported the perception that a girl who carried condoms conveyed a message to boys that the girl was available for sex (Hillier et al., 1998). Furthermore, there was also wide belief in Western countries during that era that promoting condom use as part of a public health campaign and providing sex education to young people would encourage them to engage in sexual relationships. This perception has been widely disputed by empirical research findings (Hendriksen, Pettifor, Lee, Coates, & Rees, 2007; Wong, 2012). Contrary to this belief, sex education, as found in this research, often helps young people make better decisions and can help them protect themselves, a situation needed in Indonesia where knowledge about HIV and STI transmission, prevention and cure is very poor. Research described in this thesis indicated that there was no evidence of a relationship between receiving sex education and being sexually active. As a matter of fact, responsible thought and preparation for sexual debut may be influenced by sex education (Hendriksen et al., 2007; Wong, 2012). The current phenomenon experienced by Indonesia is not unique, as there was actually a comparable situation in many Western and African countries a few decades ago (Hillier et al., 1998; Hynie et al., 2003).

Overall, especially from a practical point of view, the combination of the two qualitative and descriptive studies and the two studies based on the TPB in this thesis do increase the understanding of sexual risk behaviour among Indonesian young adult university students. For example, although the TPB based variables provided the
insight that Subjective Norm predicted the formation of Prior Intention in this research, it could not provide further information about the context and the content of the Subjective Norm. Through qualitative and descriptive studies (Study 1 and Study 2), this research found that females were reluctant to talk about condom use as they were afraid of being perceived as sexually advanced and males were unwilling to initiate condom use talk since they were afraid of being perceived as sexually taking advantage (i.e., just wanting to have sex without willingness to be responsible for their actions). This kind of perception certainly needs to be addressed in an intervention programme to increase safe sex behaviours.

In summary, this research indicates that increasing a social norm in favour of condom use will help increase the Subjective Norm in favour to condom use among Indonesian young adult university students. Communication of risks of not using a condom and the advantages of safe sex is needed to change Attitudes towards condom use of Indonesian young adults in a more positive direction, must also be improved. In addition, Indonesian students require a greater sense of control over the acquisition of condoms. Furthermore, this research has empirically identified that communication with partner about condom use and condom availability are crucial factors in predicting actual condom use. All of these factors and their relationships can be used as the basis on which to focus intervention efforts in the future.

**Theoretical Implications**

Since its introduction 29 years ago, the TPB has, by any objective measure, become one of the most frequently cited and influential models for the prediction of human social behaviour (Nishimura & Tristán, 2011; Schwenk & Möser, 2009). Ajzen (2011c) reported its popularity by conducting a Google Scholar search for the keyword “theory of planned behavior OR theory of planned behaviour”. From 22
citations in 1985, the number of citations per year has grown steadily to a total of 4550 in 2010 (Ajzen, 2011c). Overall, the TPB has been shown to be an adequate predictor of intention and behaviour, explaining 40-49% of the variance in intention, and 26-36% of the variance in behaviour (McEachan et al., 2011).

Although the TPB has been widely applied in many settings, this theory has also been the target of much criticism and debate. One of the criticisms that applied to the context of this research was that the TPB does not account for social, cultural, or demographic factors that certainly shape behaviour (Manstead, 2011). Conscious of this criticism, this research was designed by incorporating a qualitative study that examined the social and cultural, as well as demographic factors that were believed to increase the understanding of safe and risky sexual behaviours.

Similarly, consistent with suggestions by other researchers (Bennetti & Bozionelos, 2000; Cha et al., 2008; S. Moore & Rosenthal, 2006; Turchik, 2010), the inclusion of additional non-TPB variables into the model in this research did provide a better understanding of how intention is formed and how it is transformed into actual behaviour. Without the inclusion of additional variables — for instance, communication with partner and condom availability — understanding safe sex behaviours in Indonesia would be limited.

Another important theoretical implication that needs to be mentioned is that the correlation between initial (Prior Intention) and later intention (Intention in Action) was relatively low, indicating that intentions were not stable. In the context of this research, it may suggest that contextual factors play significant roles. Ultimately, this research found that Prior Intention failed to directly predict Intention in Action which in turn failed to directly predict condom use behaviour. Indeed, other research has failed to support the full model (Turchik & Gidycz, 2012). However, in
light of the relatively small sample and the fact that some variables in the models played an overwhelming role (e.g., condom availability in relation to actual condom use), the TPB itself cannot be rejected without further examination. As mentioned earlier, the aim of this research was practical. Therefore, with the inclusion of additional variables, use of this extended version of TPB had predictive utility and helped to improve our understanding of relationships between intentions and actual condom use behaviour.

**Strengths and Limitations of this Research**

The strengths of this research lie in a number of different aspects. First, this research adds to the Indonesian research and literature on safe sex practice among heterosexual university students, which currently is very minimal. Second, not only was this research designed with a theoretical foundation but it also included social and cultural factors in the exploration of sex and safe sex practices, making this research comprehensive. Third, Study 4 was prospective in design, thus making it possible to understand the prediction of actual condom use behaviour and not only the prediction of intention. Fourth, although the sample of this study was all university students and thus possibly represented urban elite middle class only, this study included a large sample with various backgrounds, including males and females from various universities, different ethnicity, social economics and sexual behaviour status, which is likely to extend the generalisability of findings to urban young adult Indonesians more generally. Fifth, this study investigated not only the formation of intention in participants who were sexually active but also those who were sexually inactive. Understanding determinants of intention among sexually inactive is important to enable early intervention to increase general intention to use condoms once they become sexually active.
There were also a number of important limitations of the studies described. All variables in this research were measured by self-report, and due to the sensitivity of this research topic, participants’ responses can be flawed and influenced by a desire for social approval. However, this weakness is certainly not unique to this study (Carmack & Lewis-Moss, 2009; Noar, Cole, et al., 2006; Turchik, 2007) and the anonymity of the questionnaires and the data collection process used are likely to have minimized this problem. Potential measurement issues may also exist in this research as the validity of measures used in this sample have not been examined. The second weakness is related to participants’ characteristics where all participants resided in Surabaya, the second largest city in Indonesia. Although research was carefully designed to capture a wide range of social economic background, available data show that access to higher education in Indonesia in low SES groups is very low, and in rural areas roughly half the number of those in urban areas are enrolled in university (Fahmi, 2007; Fahmi, Maulana, & Yusuf, 2013; Hawkins, 2011). Thus, this research should be viewed as being generalisable to urban Indonesian young adults only, and most reliably generalisable to urban middle to upper class Indonesian university students. This is especially important to be mentioned, as Indonesia is such a diverse country – ethnically, economically, developmentally and geographically — with widespread differences between cities and villages (a brief introduction on Indonesia by World Health Organizations of the United Nations can be found in Appendix I). A principle of narrow generalisation therefore must be adopted, since the generalisability of the findings outside urban Indonesian young adults is unclear. Lastly, the sample size available to study the relationship between intention to use a condom and actual condom use behaviour was very small and therefore cautious interpretation is needed. This small sample size is one of main barriers that hinders
the generalisability of Study 4 findings. However, the findings do point to factors that can be followed up in a larger study in the future.

**Future Research Directions**

The research presented in this thesis suggests questions that future studies could valuably explore. Future research could focus on how effective negotiation of condom use between partners among unmarried young people could be increased in the Indonesian context. It would be useful to include in research of this kind examination of different negotiation styles in relation to condom use and the difference between direct and indirect suggestions. This research certainly should include psychological factors as well as social and cultural perspectives, as gender and power relationship are often part of communication in condom use settings. It is also important to examine the influence of partner’s intention and the interaction between one’s own and one’s partner’s intention that may lead to successful negotiation and condom use (de Visser & Smith, 2004).

In a broader context, sex education that currently exists in few schools should be strengthened and evaluated. Research that examines the content of sex education needs to be conducted as currently it varies between one school and another (I. D. Utomo & McDonald, 2009). It is important to identify what kind of sex education is most effective in increasing safe sex behaviours but is also consistent with cultural expectations. This research should also explore the social and cultural context that can help this education and ways in which condom availability can be made more widely acceptable by the society. The finding of this research that family happiness, which included good communication between parents and children, was a protective factor in becoming sexually active requires further research to understand the nature of this communication and whether there is more discussion of sexual matters as
most Indonesian parents appear to be reluctant to communicate about sexual issue with their children (I. D. Utomo, 2003). Finally, another important issue that should be explored is how the Internet and social media can be effectively harnessed to deliver safe-sex messages to Indonesian young adults.

Conclusion

The research described in this thesis explored issues related to sexual attitudes and behaviours and safe sex practices in particular, in unmarried young adult Indonesian university students. This study provides support for the utility of an extended version of the TPB in predicting condom use intentions among Indonesian young adults. The current research also supports the notion that although intentions are important, they are not sufficient in predicting behaviour. Additional variables were found to predict actual condom use behaviour and were able to explain more variance in behaviour prediction.

This research was designed with the basic aim of increasing understanding of safe sex behaviours in the hope that it could contribute to sexual risk prevention and intervention programmes in Indonesia. Many of the results of this study could indeed inform the development of prevention and intervention programmes. For instance, the research indicates the need to create a social norm among young people in favour of talking about condom use and to make their use an accepted norm. A switch in focus to a long-term strategy to increase condom use is necessary in the Indonesian context. In particular, a focus on the general population (as opposed to the short-term strategy that focuses on IDUs and sex workers) to increase condom use is required, especially in relation to young adults who are at risk since most people who engage in risky sexual behaviours fall in this age category (East et al., 2007; Jemmott, 2012).


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Appendix A

Sexual risk attitudes and behaviours among young adult Indonesians

(Next page)
Sexual risk attitudes and behaviours among young adult Indonesians

SIMON SIMON and SUSAN J. PAXTON

This research explored the beliefs of 18–24-year-old Indonesians of Javanese and Chinese background regarding perceptions of sexual behaviour and condom use. Participants were volunteers from ten Surabaya universities. Twenty-five same gender and ethnic background focus groups were conducted. Sex before marriage was believed to be becoming more usual and acceptable among young adults, although parental and religious disapproval were recognized. Boyfriends and girlfriends were considered to be the most usual sex partners. However, sex workers were believed to be moderately frequent partners for Chinese-Indonesian males. ‘Safe sex’ was mainly associated with pregnancy prevention. The risk of contracting a sexually transmissible infection (STI) was regarded as low and condoms were believed not to be used often for disease prevention. A number of ineffective strategies were believed to prevent or cure STIs, suggesting that STI prevention interventions in Indonesia still need to emphasize improving knowledge. Ambiguities in condom provision and circumstances for use are likely to make negotiating condom use difficult. Perceptions of the acceptability of use of sex workers amongst more affluent young males, and the negative attitudes towards condom use under these circumstances, suggest prevention interventions should particularly address this dangerous combination.

Introduction

Understanding attitudes towards sexual risk behaviour in Indonesia is increasingly important. The human immunodeficiency virus (HIV) and the acquired immune deficiency syndrome (AIDS) have become international health problems. The epidemic is growing significantly in South and South-East Asia (UNAIDS 1998). As of September 2003, the total number of confirmed cases of HIV/AIDS in Indonesia was 3924 (Directorate General CDC and EH 2003). The World Health Organization (WHO) has confirmed the low prevalence reported by Indonesian authorities, but has warned of the possibility of misdiagnosis and under-reporting. Indeed, UNAIDS (2000) estimates that 52,000 people were living with HIV/AIDS in Indonesia at the end of 1999. In June 2001, at the United Nations General Assembly Special Session on HIV/AIDS, the Indonesia Minister of Health and Social Welfare reported that there were approximately 120,000 Indonesians living with HIV/AIDS.
(Indonesian National AIDS Commission Republic of Indonesia 2001, Indonesian Health Department 2002). In Indonesia, consistent with the rest of the world, young people under the age of 25 years are especially vulnerable to HIV infection.

Data on other Sexually Transmitted Infections (STIs) in Indonesia are also potentially unreliable. In a 1994 study of housewives attending five clinics in Jakarta, 29% of the 6666 patients were reported to be infected by STIs (Kompas 2000). In 1998, in a sexual health check up for 404 pregnant women in Jakarta and Riau, it was found that 16.1% had candidosis vaginalis, 12.6% bacterial vaginosis, 4.2% chlamydia and 1.2% trichomoniasis (Kompas 2000). Another study in North Jakarta found that 14.4% of 486 housewives were infected by STIs (Iskandar et al. 1998). These studies suggest STIs are quite prevalent in Indonesia.

In 1997, the World Bank reported that HIV has been detected sporadically among sex workers in Indonesia, although it had not spread rapidly (World Bank 1997). A study in Indonesia, Thailand and Singapore found a large difference between the number of unmarried men and women aged 15–19 years reporting having had sexual intercourse. The difference suggests that many unmarried young men may have contact with either sex workers, older women who are already sexually experienced, or a same sex partner (Carael 1995, Utomo et al. 1998).

During the last four years, due to the severe monetary crisis experienced by Indonesia, many unmarried young women have become sex workers for economic reasons. Many of these women choose to work on the street rather than in a lokalisasi or red light district, in which there are many brothels, as it is easier and less restrictive. It is likely that these women especially do not have regular access to sexual health check-ups, which are compulsory on a weekly basis for those working in lokalisasi. Very frequently, a sex worker will also have a steady boyfriend who is also involved in other non-monogamous relationships (Utomo et al. 1998). This combination of circumstances is likely to facilitate the spread of STIs among young people.

Recognition of the growing incidence of STIs is not reflected in the development of effective prevention programmes. Short of abstinence or mutual monogamy, it is widely recognized that consistent condom use is a valuable preventive measure (WHO and UNAIDS 2001). A three-year STD/HIV Risk Behavioural Surveillance Survey (1996–1998), conducted in three major Indonesian cities, which predominantly surveyed sailors and seaport labourers, male factory workers, truck drivers and sex workers, clearly indicated that, despite increasing knowledge of STIs/HIV/AIDS, condom use among male respondents and female sex worker, was decreasing. The survey found that only 9% of participants always used condoms when having sex with a female sex worker. The main reason given for non-use of condoms was perceived reduction of pleasure (Utomo et al. 1998).

Even though there is no agreement on the percentage of unmarried young people who are sexually active recent research shows that there has been an increase in the frequency of young people who are now engaging in sex before marriage. Research conducted in Manado as part of the
three-year STI/HIV Risk Behavioural Surveillance Survey found that 20% of unmarried male adolescents and 6% of unmarried female adolescents reported having had sexual intercourse (Utomo et al. 1998). A more recent survey carried out by the Biomedical Laboratorium of Airlangga University found that 40% of unmarried male student participants and 7% of unmarried female student participants reported having had sexual experience (Winarso 2002).

The extent of condom use in young adults is not well known. However, it is generally assumed to be low (Utomo et al. 1998, Indonesian National AIDS Commission Republic of Indonesia 2001). While research is required to confirm this, there are a number of potential reasons for low condom use among Indonesian young people. Indonesia has always regarded itself to be a religious country with nilai-nilai ketimuran, ('good Eastern values'), and authorities have been reluctant to consider that many young people are now engaging in sex before marriage. The term seks bebas ('free sex'), used to describe sexually active young people, has been associated with Western cultures. Consequently, the STI prevention efforts of non-government organizations funded by foreign health programmes are considered to be promoting ‘free sex’ and marketing on behalf of condom companies (Jawa Pos 2002). Rather than deal with the sexual health of unmarried adolescents and young adults, many Indonesian societies have focused on trying to reduce exposure to Western culture in order to keep unmarried young people sexually inactive.

Consistent with this view, the Indonesian National AIDS Strategy proposes that all HIV/AIDS prevention messages be socially and religiously appropriate as expressed in the ‘ABC’ concept (abstinence, faithfulness and condom use). Thus, the practice of abstinence is promoted to the unmarried population, while faithfulness and condom use are promoted to the married and sexually active populations (Utomo et al. 1998). Indonesian Criminal Law (KUHAP pasal 534) prohibits showing a contraceptive device to unmarried people under 17 with a penalty of up to 2 months jail, or a fine of Rp 3000. Further, prevention efforts are frequently associated with moral and religious teaching. For example, the Islamic guidebook of AIDS Education published by Indonesia Health and Social Welfare Department concludes that one possible cause of AIDS is a curse from God (Pusat Penyuluhan Kesehatan Masyarakat DepKes 1996).

A second explanation of low condom use among Indonesian unmarried young people is the potential inadequacy of the content of STI and HIV/AIDS prevention programmes. Both psychosocial theories and actual prevention interventions have been criticized for failing to consider the broader cultural and social contexts of sexuality, which influence the decisions of individuals in relation to the practice of safe sex (Amaro 1995, Diaz 2000). For instance, condom use requires agreement and communication (Boldero et al. 1992, Kashima et al. 1993), but acceptable communication practices are culturally determined and may involve gender and power relationships and even religious influences.

Widely held attitudes, beliefs and behavioural practices that relate to safe sex among unmarried young adults in Indonesia are not well
understood. In order to better inform culturally appropriate prevention strategies, the aim of this research was to explore perceptions of attitudes, beliefs and practices in relation to sexual relationships and condom use among differing groups of young people.

Indonesia is culturally and ethnically diverse, and thus there are likely to be differences in beliefs and behaviours in relation to safe sex between ethnic groups. For example, there is a belief that proportionately Indonesian Chinese are major users of prostitution (Irwanto Irwanto personal communication 2002). Wolffers et al. (1999) also observed that Indonesian Chinese were more likely to use condoms than native Indonesians.

**Method**

**Participants**

Participants were 176 students, aged 18–24 years, from ten universities in Surabaya: three public, one Christian private, one Catholic private and five general private universities. The students were mainly drawn from Humanities and Economics faculties. Students at the universities were mainly from the middle class and of either Javanese or Chinese Indonesian background.

Focus groups varied by gender and ethnic group. It was anticipated that males and females would have differing attitudes, beliefs and practices due to the greater religious and social imperative for virginity, and the more immediate consequences of pregnancy, for females. To enhance confidence in speaking out on potentially sensitive issues, same gender focus groups were constructed.

Two ethnic groups were examined in this study, Javanese and Chinese. These were chosen as representing the majority and the largest minority ethnic group respectively. About 45% of 224 million Indonesians are Javanese, while Indonesia’s Chinese comprise just 3% of the population (Backman 1999). Although small in population, the Chinese control between 60–80% of Indonesia’s economic activity (The Straits Times 1997). There are numerous social implications of this imbalance. The Indonesian Chinese have greater access to health and education in Indonesia and many of them go to more expensive private universities. The Javanese on the other hand, mainly go to public universities or more affordable private universities. In terms of religion, the Javanese are more likely to be Muslim, while the Indonesian-Chinese are more likely to be Christian or Buddhist. Research has yet to explore potential differences in attitudes towards safe sex in relation to different ethnic backgrounds in Indonesia. In total, 25 focus groups, with 6–8 people in each, were conducted: eight male Javanese groups, seven male Indonesian Chinese groups, five female Javanese groups and five groups of female Indonesian Chinese.
Focus group questions and response coding

Sixteen questions exploring beliefs about attitudes towards sexual relationships in general, and those more specifically related to safe sex and condom use among unmarried young adults were used to guide focus group discussions (Appendix 1). Participants were not asked directly about their own sexual behaviour (e.g., whether they were sexually active/inactive). Rather, in order to facilitate participation and free flow of information, questions explored participants’ views in relation to unmarried young people’s knowledge, belief and attitude toward sexual behaviour and safe sex.

Responses to questions were analysed using thematic content analysis. Responses were classified against ethnicity and gender on different topics including: the meaning of ‘sexual relationship’, opinions of sex before marriage, reasons for engaging in sex before marriage, reasons for abstinence, type of first sexual partner, meanings of ‘safe sex’, perceived risk of STI/HIV, safe sex strategies, factors that encourage or discourage condom use, and suggesters of condom use and the condom provider. Where possible, every response from participants was coded according to topic.

Procedure

Ethical approval was gained from the University of Melbourne Human Ethics Committee. Participants were recruited in different university settings. Lecturers in the ten different Surabaya universities, mainly from Humanities and Economics faculties, were contacted. The lecturers provided information about the focus groups to their students this included information that participation was entirely voluntarily. Willing students were contacted by the researcher and attendance at a group organized. Focus groups were conducted in Bahasa Indonesia. Each focus group was audio-taped and took approximately 90 minutes. All data was transcribed and coded in Indonesian and then translated into English.

Results

The meaning of a ‘sexual relationship’

The meaning of a ‘sexual relationship’ was explored to provide a context for the following discussion. Many participants gave the meaning of a sexual relationship as sexual intercourse, and most participants described a sexual relationship as a purely physical relationship as opposed to an emotional, love relationship between two persons. However, when participants were asked about their ideal sexual relationship, most quickly added that it should not be for sexual pleasure only but should be an expression of love, which ideally happens in the more serious and responsible context of marriage.
An intimate physical relationship between two people to get pleasurable feelings and for having children. (Javanese female)

Sex before marriage is never about love. It’s different if you do it after marriage. You do it because you love each other. (Chinese male)

Sex before marriage

The majority of participants perceived sexual relationships as something sacred that should occur in a binding marriage. Despite this, many female and male participants also perceived sex before marriage as something natural, more acceptable now than previously, and no longer taboo within the younger peer group, although still socially frowned upon. A number of males particularly expressed the view that sexual relationships before marriage were acceptable as long as there was love and they were responsible.

Within focus groups, there was a very widespread belief that friends of participants engaged in sexual relationships (20–60% of female and 20–80% of male participants), suggesting the presence of a norm of acceptance of sexual behaviour among young adults whether young people were actually sexually active or not.

For most young people now, it seems that a relationship is tasteless without sex. (Chinese female)

Many say it’s unacceptable, but actually they do it, and I think although 90% of society might say that it’s unacceptable, but for adolescents, it’s just okay. You know why? Because it’s normal! It’s forbidden, but in fact it’s very hard to prevent. (Chinese female)

I agree with sex before marriage but it must be with responsibility and within certain boundaries. (Javanese male)

Sex before marriage is acceptable as long as it is within normal boundaries and you are aware of the risks. (Chinese male)

It’s OK if the couple really love each other and are prepared to be responsible for what they are doing. (Chinese male)

There were varied opinions regarding the acceptability of sex before marriage and its association with modernization. A number of participants said that it was understandable that young people were becoming more permissive regarding sex before marriage because they saw this behaviour as part of modern lifestyle. In addition, for some male participants, engaging in sex before marriage appeared to be a matter of pride. Despite this, the same men frequently believed it was unacceptable for females to have sex before marriage and indicated a woman’s virginity was still important to them.

We are more permissive now. It’s sacred, but because of the advancement of communication technology and since you can find pornographic videos everywhere, it has become very normal for young people to engage in sexual relationships. Also, because of modernization, many of us think that virginity is not very important any more. (Javanese female)

Young people should not do it, especially women, because people will think that they are cheap and their future husband will know that they are no longer a virgin. (Chinese male).
If a man does it, it’s just okay. But if girls do it, they will be branded as cheap. You know, there is a saying, a man makes the stain and the woman gets stained. (Javanese male)

Many of my friends think that you will look cool if you are sexually active. It’s kind of a trend and it means that you aren’t an out-of-date adolescent. (Javanese male)

For the girls, we can’t admit that we have ever had sex because many boys will think that we are cheap. But I think many girls feel that being sexually active is a consequence if you want to be a modern girl, just like on the TV. (Javanese female)

Overall, opinions regarding the appropriateness of sex before marriage did not appear to be associated with either ethnic group or gender.

*Reasons for engaging in sex before marriage*

Sexual desire and curiosity were the most common reasons given for young people engaging in sex before marriage. This curiosity was reported as arising from different sources, ranging from the influence of movies and peers, through to the quiet situations that encourage couples to experiment together.

Because they’re anxious to know and with motivation from friends, they finally want to try it. (Chinese male)

Maybe because of the influence of pornographic videos. After watching these videos, they just can’t contain their lust. (Javanese male)

Girls, we can hold our sexual desire, but boys, they can’t. Especially after watching blue movies and they start fantasizing. The next step, they are ready for release. If they have money, they buy sex from a sex worker, but if they don’t have money, then his partner becomes his target. (Javanese female)

Compared to male Javanese, Indonesian Chinese males reported feeling more pressure from their friends to engage in sexual activity. Events were described in which Chinese males would go together outside the town to a recreational area with many brothels. One or two sex workers would be hired and every person would have their turn.

If they know that you’re still virgin, they try to influence you and they even will take you with them to a prostitute. Some of them even pay for you. (Chinese male)

Love is also one of the reasons but mainly suggested by female participants. Many believed that sex tightens a relationship, although they also suggested that sometimes girls engage in sex before marriage because they worried that their boyfriend would break off the relationship if they refused to do so.

They want to show their love to their partners, even if they must prove it with losing their virginity. (Javanese female)

It’s all rubbish. Man and woman have sex because they are too horny. Love is just their justification. (Javanese female)

For other participants, in particular young men, having sexual relationships was nothing more than a life style. They take it for granted because many of their peers are having sexual relationships and they feel they need sexual satisfaction.
Reasons for abstinence

There were no apparent differences between groups regarding reasons for abstinence. Most participants who expressed beliefs in the importance of abstinence believed that they were still bound by religion and social norms and were afraid of the risks associated with sex before marriage—such as losing virginity and pregnancy. In addition, many participants suggested that having sex before marriage was a rebellious act and that having good communication with parents and strong family ties was associated with abstinence. Many participants believed that their future would be adversely affected by being sexually active. However, among male groups, there was also some scepticism about the reasons for abstinence among females.

It’s just not the time. We are still students. (Javanese female)

We are afraid of sin. (Chinese female)

We are not ready yet. (Chinese male)

We are afraid of the consequences. The pleasure is just for a couple of minutes but the sorrow would be forever. (Javanese male)

Religion has great influence. Usually people who do have sexual relationships are not religious, even though they do sholat [Moslem prayer]. (Javanese female)

Of course religion has a big role but may be people just don’t give thought about it. (Chinese male)

They [women] are just waiting for the opportunity. (Chinese male)

May be because they [women] just don’t have partner! (Javanese male)

Type of first sexual partner

Almost all participants agreed that women usually have their first sexual encounter with their boyfriend while for men, the first sex encounter was usually believed to be either with a girlfriend or sometimes with a female sex worker. Male Javanese reported the first partner was usually a girlfriend. In male Indonesian-Chinese focus groups, participants believed the first partner of many Chinese men was a sex worker.

Because young Chinese usually know about sex earlier than Javanese, and are mostly rich, they have videos and money to pay prostitutes. (Chinese male)

Meaning of safe sex and perceived risk of STI/HIV

‘Safe sex’ was mainly understood to mean the avoidance of pregnancy. In Indonesia, becoming pregnant almost invariably means getting married, even if divorce follows thereafter. Unwanted pregnancy has therefore immediate and generally negative social consequences. Thus, safe sex, for female participants particularly, was also viewed as a sexual relationship within marriage.
HIV or STI isn’t threatening, pregnancy is! (Chinese female)

Safe sex is a sexual relationship after you are married, that’s it. (Chinese female)

While the risk of pregnancy was viewed as high, the risk of acquiring HIV/AIDS was regarded as very low. The risk of acquiring an STI was also regarded as low, and, in addition, the consequences of an STI were seen to be relatively insignificant. Further, while focus group participants suggested that young people may be at some risk of acquiring an STI, they personally did not believe that they would be infected as they were young, did not have many partners, and believed they could differentiate between the ‘clean’ and ‘dirty’ partner. They also believed that the prevalence of STI/HIV was very low in Indonesia.

I think it's different in Western countries. Here, there are not many people who have HIV/AIDS. If you get ‘influenced’ (infected by an STI), all you have to do is just go to the doctor, that’s it. (Javanese male)

Indonesia is different from Western countries. Here we don’t change partners too often. We don’t have many partners. (Javanese male)

You can see from her body whether she is too thin or not. Look into her eyes and see whether they are red or not, and also when she talks, if she is sick you can tell from her breath. (Chinese male)

Safe sex strategies

Since safe sex was viewed mostly in terms of prevention of pregnancy, most participants suggested unmarried young people engaged in non-intercourse sexual activity, although condom use was also mentioned quite often as one of the strategies used. Many participants said that non-intercourse sexual relationships, ranging from masturbation, kissing, necking, petting to oral sex are much more common in unmarried young people’s sexual behaviour. They argued that through these kinds of behaviours, they could still obtain sexual pleasure while minimizing the risks associated with pregnancy and losing female virginity.

You can do everything, except intercourse. (Javanese female)

It’s much better and safer for us if we just do ‘passport size photo’ [anything from waist up] or petting if you have to. (Chinese female)

Oral sex, it’s a trend now. (Javanese male)

A number of other strategies were believed to prevent acquiring any STI/HIV. These included: not having a sexual encounter when not physically fit, choosing a clean partner, and taking antibiotics before and after sexual intercourse with a female sex worker.

If you feel tired, you shouldn’t do it because you can easily get the virus. (Chinese male)

They said that every time after you do it with a prostitute you have to drink two Super Tetra [an antibiotic brand]. (Javanese male).

I have a friend who sometimes has casual sex. When I ask her ‘Aren’t you afraid of sex diseases?’ she replied, ‘I pick them up [men], they don’t pick me up. I choose only the good
guys. They are very nice and I don’t think they sleep around’. (Javanese female)

My friend says, ‘If you get the “flu” [STI], if you go to a commercial sex worker and they give you oral sex, then you will be cured’. (Chinese male)

Factors that encourage or discourage condom use

The situation was described as playing an important role in determining condom use. It was generally agreed that young people do not regularly use condoms and seldom use them during their first sexual intercourse.

It’s important to look inexperienced in front of your girlfriend, otherwise she may refuse it. (Javanese male)

If you go to a prostitute for the first time, you really want to feel it without a condom. You want to feel the real sex! (Chinese male)

If a sexual encounter is not planned then it is most likely a condom will not be used as it is more likely that a condom will not be available. However, condoms were widely used for pregnancy prevention and were favoured over other contraception methods, although a calendar system was also practised by many women.

Condoms are safer than other methods, because young women usually don’t know how to get and use pills. Besides, using pills just makes you appear like an old lady because their Mums usually use pills. (Javanese female)

It was also believed that the type of partner also played a part in whether a condom was used or not, but there was not a very consistent pattern of use in relation to partner type. For example, sometimes a condom would be used with a girlfriend to protect her. On the other hand, sometimes a condom would not be used as to do so would be seen as an indication of lack of commitment to a girlfriend. Similarly with a commercial sex worker, some men would use a condom to protect themselves, but others would not use a condom in order to maximize pleasure.

If you play with your girlfriend, then you must use a condom. But if you do it with a sex worker, certainly not, because there is no responsibility and because you pay a sex worker to get pleasure. Why do you have to use a condom? (Javanese male)

With girlfriend, they won’t use a condom, instead they may drink sexual tonics [to have stronger or longer sex], but with a prostitute they will use a condom to protect themselves. (Chinese male)

If women have intercourse with their boyfriend, I guess they don’t use a condom because they want to show their love to each other. (Chinese female)

Many participants also suggested that condom use was viewed unfavourably, since it is perceived as reducing sexual pleasure.

Certainly I wouldn’t use a condom, it’s not enjoyable. (Javanese male)

Condoms aren’t good but they can help you delay ejaculation. (Chinese male)

My friends said that using a condom make it less pleasurable. (Javanese female)
**Suggestion of condom use and condom provider**

While most participants agreed that it is the man who usually provides condoms since it is easier for a man to buy condoms at street kiosks, pharmacies or supermarkets, the suggestion of condom use may be made by either men or women with pregnancy as the main issue. However, there were contradictions in the reasons given regarding who should provide condoms.

- It must be women, because they don’t want to be pregnant. (Chinese male)
- Men, because men usually worry more if their girlfriend becomes pregnant. (Javanese male)
- Men, because they don’t want to be responsible. Many of them just want to have fun. (Javanese female)
- If the woman suggests it, then the women would be doubted. How can she suggest it? She must have had sex before. (Chinese male)
- If with a sex worker, usually they suggest it. They usually provide them for free but sometimes you have to pay. (Chinese male)

**Discussion**

To date, the majority of research into safe sex practices has used Western samples and the findings are unlikely to be generalizable to other societies. The present research provides information about beliefs regarding current attitudes towards sex and condoms among unmarried young adults in Surabaya. Initially, a picture was gained of general attitudes towards sex and in particular sex before marriage. A distinction was often made between a sexual relationship before marriage and one within a marriage. In the former, sex for pleasure was often regarded as important, while sex as the expression of love was regarded as more important within a marriage.

Beliefs and attitudes about sex before marriage are consistent with the present time being one of shifting values and behaviours, in which sex before marriage is becoming accepted as a reality among young adults. A number of observations support this view. Sexual activity before marriage, if not necessarily intercourse, was widely, though by no means universally, regarded as normal. While not specifically endorsing sex before marriage for themselves, many young participants believed their peers were sexually active. As perceptions of social norms tend to influence personal decision-making (Ajzen 1991), this belief may contribute to young people making personal choices to engage in sex before marriage. There was also wide acceptance of non-intercourse sexual behaviour in which it appeared that participants did not oppose intercourse relationships *per se*, but rather chose non-intercourse to avoid pregnancy and loss of female virginity.

Also consistent with a view of changing attitudes towards sex before marriage, participants indicated that they believed sex before marriage was viewed as unacceptable by older members of society. Some participants associated sex before marriage with the modernization and with being
‘modern’. Modernization is associated with Westernization by Indonesian authorities and religious leaders, who consider sex before marriage and ‘free sex’ as products of Western cultures. Espin (1997) has reported a similar situation in Latin America in which many Latino parents view being promiscuous as becoming Americanized. Television programmes from Western countries, often with sexual scenes, are perceived by young people as a confirmation that to become a modern adult, one has to be sexually active. If liberal attitudes and beliefs such as these are held, an increase in related behaviours is likely and safe sex interventions in urban Indonesia need to be guided by this reality.

Sexual desire and curiosity were the most common reasons given by focus group participants as to why young people engage in sex before marriage. With this reality in mind, adequate sexual education is required to ensure that young people know how to appropriately protect themselves against both pregnancy and STIs, as restricting sexual information is not likely to restrict sexual activity. However, sex before marriage was not endorsed by all young people and both men and women gave reasons for remaining sexually abstinent including retaining female virginity and fear of pregnancy. In a society in which becoming pregnant before marriage is considered damaging to family honour and marriage is expected, fear of pregnancy is predictable. This is comparable with attitudes in Catholic Latino families (Raffaeli and Ontai 2001) and in other Muslim countries where women are judged by their sexual conduct (Bauer 1985).

Religious factors were also found to be very important determinants in decisions to remain sexually inactive. However, many young people appeared to be becoming less committed to upholding religious and moral teachings. Recent studies of sexual behaviour in other religious countries, for instance in Morocco, show a similar situation in which young Moroccans are changing their attitudes towards premarital sexual activity (Obermeyer 2000).

Differences were observed between men and women and different ethnic groups in perceived attitudes and beliefs about pre-marital sex. Focus group participants believed that a woman’s sexual partner was likely to be her boyfriend while men tended also to have sexual encounters with sex workers. Women, to a greater extent than men, used love as the justification for a sexual relationship. This justification may enable a young woman to feel better about herself since this may facilitate differentiation between herself and a *perek* (experimental girl).

Javanese and Indonesian-Chinese ethnic groups shared many common beliefs and practices. However, there was a strong belief that the Chinese were more likely to use sex workers than their male Javanese counterparts. This may be in part due to financial circumstances. Among the Chinese male group, there was a belief that Javanese girls were more likely to say yes if asked to engage in casual sex. Compared to Javanese men, Chinese men also reported feeling more pressure from their peers to engage in sex. Sexual education programmes may need to take into account sub-cultural differences with Indonesia.

Within the cultural context of pregnancy outside wedlock almost invariably requiring marriage, ‘safe sex’ was primarily regarded as preventing pregnancy
rather than STIs. While condoms when used to avoid pregnancy could be helpful in avoiding STIs, they may not be used consistently and alternative contraceptive methods, ineffective in STI prevention, may also be used. In addition, the risk of acquiring an STI is regarded as low. This view is most likely reinforced by government underestimation of prevalence (UNAIDS 2000). As suggested by Castañeda et al. (2001), if the community does not recognize the risk, it is not likely that individual members will do so.

Focus group data indicated that many young Indonesians have poor knowledge about STIs and preventive strategies. Many men especially held beliefs that could be described as ‘magical thinking’ such as oral sex with a sex worker can cure an STI. This kind of magical thinking has also been reported to be widespread amongst sex workers in Indonesia. Wolffers et al. (1999) reported that it is common practice for a sex worker to look at her client’s appearance, check his odour and inspect his sexual organs. Many sex workers also believe that washing with soap or toothpaste after unprotected sex prevents STIs. These findings suggest that STI prevention programmes need to provide extensive and reliable information and to increase relevant knowledge. Indeed, our research suggests that in many aspects Indonesian young people have similar sexual attitudes to those in Western countries, but differences between Indonesian and Western cultures appear to be especially notable in respect to knowledge relevant to STI prevention.

Focus groups identified situations and beliefs that encouraged and discouraged condom use, though there were considerable inconsistencies. For example, both using and not using a condom was described as an expression of love for a boyfriend or girlfriend. Of particular concern was the view that both using and not using a condom was regarded as appropriate when having sex with a sex worker. Sex with sex workers at high risk of STIs, and negative attitudes about condom use in this situation, is a particularly risky combination in relation to acquisition of STIs. Observation of this combination is also consistent with previous research (Carâel 1995, Utomo et al. 1998). However, our data indicate that the negative attitudes are not consistent. This may reflect relatively unstable attitudes regarding condoms and in such an environment a well-constructed prevention programme could have a particularly valuable impact.

In relation to the gender politics of condom use among young Indonesian adults, men were reported to have greater power than women. A number of women participants suggested that many unmarried young women engage in a sexual relationship because they are worried that their boyfriend would break off their relationship if they refuse to do so. This suggests that many young women may feel they have little power over their sexual decision-making. Power differences can also be seen in the buying of condoms in which even though an unmarried young women may suggest condom use, it is only acceptable for men to buy them. This situation makes women dependent on men in relation to condom use and suggests male attitudes need to be a focus of prevention interventions. As suggested by Castañeda et al. (2001) in the Mexican context, HIV/AIDS
campaigns may endeavour to empower individuals, but they will not be effective if they ignore wider social norms, expectations and controls.

There were a number of limitations of this research. While we endeavoured to gain information from a wide range of participants in non-threatening conditions, it is likely that the sample was biased towards those who were not so inhibited about discussing these matters and towards the middle class. In addition, there are many ethnic minorities in Indonesia who were not targeted. Consequently, it is not clear the extent to which these finding may be generalized to all young adult Indonesians. A further limitation is that while focus groups facilitate identification of the range of beliefs existing on a topic, the actual proportions of the sample holding specific views is not known. Quantitative research is required to gain this information. Finally, we asked specifically about perceptions of behaviours within their peer group rather than one’s own behaviours in order to facilitate discussion. It is not clear the extent to which perceptions reflect subsequent behaviour.2

Conclusion

This research highlights the need for STI/HIV prevention interventions in young adult Indonesians that take into account the changing social attitudes and behaviours regarding sex that are likely to result in an increase in sexual activity before marriage. Condoms are not reported to be widely used for disease prevention and erroneous beliefs about STIs, their prevention and cure, appear widespread. Changing attitudes and behaviours are likely to increase the risk over coming years if effective campaigns are not put in place. There would be no better time than now to introduce interventions that take into account the reality of the changing social environment of young adults in Indonesia.

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Notes

1. There are three types of sex worker in Surabaya: pelacur (prostitute) or usually called WTS (wanita tuna susila = woman without morals), perek (perempuan eksperimen = experimental girl) and pecum (perempuan cuma-cuma = girl for free). WTS are those who get paid for providing sexual services and who make the world their primary source of income. Perek are adolescent girls who work on the streets, shopping centres, or discotheques in which they get paid for providing sexual services, usually with older clients. Perek often give free sexual favours to a male peer if they like the man. Pecum are adolescent girls who are willing to give sexual services—often non-intercourse.
relationships—in exchange of gifts such as clothes, cosmetics, dinner, a movie, or sometimes cash. Pecum can be found mainly in shopping centres or discotheques.

2. Knowledge, attitudes and practice are currently being assessed in a follow-up study by the authors.

References


Appendix 1

1. What does ‘sexual relationship’ mean to you?
2. What opinion do you think men/women of your age have about sex before marriage?
3. How many men/women your age do you think have had sex?
4. Why do you think young people engage in sexual intercourse or remain abstinent?
5. Does religion play a part in decisions about sex before marriage?
6. What type of person (e.g., boyfriend, CSW) is usually a person’s first sexual partner?
7. What comes immediately to your mind if I say ‘safe sex’?
8. Do you think that young people of your age are vulnerable to HIV/STIs? Why?
9. What do you think are safe sex strategies of young people, including those for STIs?
10. Do you think that people about the same age as you mostly use condoms if they have sex?
11. In what situations do you think young people are most likely to use condoms?
12. Why do you think they use or don’t use a condom?
13. What attitudes do you think young people have towards condom?
14. For those young people who use condoms when having sex, who do you think mostly suggests using a condom and provides it?

Résumé

Cette recherche a exploré les croyances de jeunes indonésiens âgés de 18 à 24 ans et d’origine javanaise ou chinoise, sur les perceptions des comportements sexuels et de l’usage du préservatif. Les participants ont été recrutés dans dix universités du Surabaya. Vingt-cinq groupes-focus réunis par genre et par origine ethnique ont été conduits. Les rapports sexuels pré-maritales sont perçus comme devenant plus courants et plus...
acceptables chez les jeunes adultes, bien que la désapprobation parentale et religieuse soit reconnue. Les petit(e)s ami(e)s sont considéré(e)s comme étant les partenaires sexuel(le)s les plus habituel(le)s. Cependant, les travailleuses sexuelles sont perçues comme des partenaires assez fréquentes pour les indonésiens d’origine chinoise. Le « sexe sans risque » est principalement associé à la contraception. Le risque de contracter une infection sexuellement transmissible (IST) est considéré comme faible et les préservatifs sont perçus comme étant peu utilisés pour prévenir les maladies. Certaines stratégies inefficaces sont perçues comme pouvant prévenir ou guérir les IST, ces croyances suggérant que les interventions de prévention des IST en Indonésie doivent continuer de souligner la nécessité d’une amélioration des connaissances. Les ambiguïtés sur la mise à disposition des préservatifs et sur les circonstances de leur utilisation compliquent probablement la négociation sur le préservatif. Les croyances sur l’acceptabilité du recours aux travailleuses sexuelles chez des jeunes hommes plus aisés et les attitudes négatives vis-à-vis de l’usage du préservatif dans ce contexte suggèrent que les interventions de prévention devraient particulièrement prendre en considération cette combinaison dangereuse.

**Resumen**

En este estudio se examinaron las creencias de jóvenes de Indonesia entre 18 y 24 años de origen javanés y chino con respecto a sus percepciones de conductas sexuales y el uso de preservativos. Voluntarios de diez universidades de Surabaya participaron en veinticinco grupos de discusión con participantes del mismo sexo y raíces étnicas. Los participantes consideraban que el sexo antes del matrimonio era cada vez más común y aceptable entre los jóvenes, si bien reconocían que existía una desaprobación por partes de padres y por motivos religiosos. Manifestaron que los compañeros sexuales más usuales eran sus novias o novios. Sin embargo, según los participantes los hombres de origen chino-indonesio tenían relaciones con prostitutas con bastante frecuencia. El sexo seguro se asocia generalmente con la prevención de embarazos. Se consideraba que el riesgo de contraer una infección por transmisión sexual era bajo y que no se utilizaban con frecuencia preservativos para prevenir enfermedades. Para prevenir o curar enfermedades de transmisión sexual creían en estrategias poco eficaces lo que sugiere que todavía se necesita dar más énfasis a la información en las intervenciones para la prevención de tales enfermedades en Indonesia. Debido a las ambigüedades en el suministro de preservativos y las circunstancias para usarlo, es difícil negociar el uso de preservativos. Las percepciones de aceptar las relaciones con prostitutas entre hombres jóvenes más acomodados y las actitudes negativas hacia el uso del preservativo bajo estas circunstancias sugieren que en las intervenciones de prevención debería tratarse especialmente esta peligrosa combinación.
Appendix B

Ethics Application and Approval

(Next page)
THE UNIVERSITY OF MELBOURNE
HUMAN RESEARCH ETHICS COMMITTEE

APPLICATION FOR APPROVAL OF A
PROJECT INVOLVING HUMAN SUBJECTS

Registration No. (office use only) 000320
Period of Approval (office use only) 000000 to 000000

This application form should be used by investigators seeking human ethics approval for individual projects. Should your research project fit within an already approved program of research for which your Department has gained HREC clearance, please use the Project within Program Application form (Form 3). Note that this and other human ethics application forms can be found at: http://www.unimelb.edu.au/research

The original and 12 copies of your completed application must be submitted to the Committee by the due date. No handwritten applications will be accepted. Research must not commence until written approval has been received from the Committee.

PROJECT TITLE:
Sexual risk behaviour among Indonesian heterosexual young adults

THIS PROJECT IS:
☐ Staff Research Project
☐ Practical Class
☐ Student Research Project
☐ Funded Consultancy
☐ Clinical Trial
☐ Other - Please Describe:
☐ Doctorate
☐ Honours
☐ PhD
☐ Postgraduate Diploma
☐ Masters

PRINCIPAL INVESTIGATOR(S): Supervisors and co-supervisors of student projects are Principal Investigators. PhD students can be listed as Principal Investigator along with their supervisors.

<table>
<thead>
<tr>
<th>TITLE/SURNAME</th>
<th>FIRST NAME</th>
<th>PHONE</th>
<th>FAX</th>
<th>EMAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dr. Paxton</td>
<td>Susan</td>
<td>8344 63107</td>
<td>9347 6618</td>
<td><a href="mailto:s.paxton@psych.unimelb.edu.au">s.paxton@psych.unimelb.edu.au</a></td>
</tr>
<tr>
<td>Simon</td>
<td>Simon</td>
<td>8344 5519</td>
<td>9648 7255</td>
<td><a href="mailto:simon@pgrad.unimelb.edu.au">simon@pgrad.unimelb.edu.au</a></td>
</tr>
</tbody>
</table>

OTHER INVESTIGATORS:

<table>
<thead>
<tr>
<th>TITLE/SURNAME</th>
<th>FIRST NAME</th>
<th>PHONE</th>
<th>FAX</th>
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</tbody>
</table>

FACULTY/DEPARTMENT/SCHOOL/CENTRE: Faculty of Medicine, Dentistry and Health Sciences/Department of Psychology/School of Behavioural Science

DECLARATION BY INVESTIGATORS
The information contained herein is, to the best of my knowledge and belief, accurate. I have read the University’s current human ethics guidelines, and accept responsibility for the conduct of the procedures set out in the attached application in accordance with the guidelines, the University’s Code of Conduct for Research and any other condition laid down by the University of Melbourne’s Human Research Ethics Committee or its Sub-Committees. I have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my obligations and the rights of the subjects.

I and my co-investigators or supporting staff have the appropriate qualifications, experience and facilities to conduct the research set out in the attached application and to deal with any emergencies and contingencies related to the research that may arise.
DECLARATION BY DEPARTMENT HUMAN ETHICS ADVISORY GROUP (DHEAG)

DATE APPLICATION RECEIVED: ..........J......... DHEAG NO: .........

☐ TECHNICAL REVIEW COMPLETED ☐ ETHICAL REVIEW COMPLETED

The DHEAG has reviewed this project and considers the methodological, technical and ethical aspects of the proposal to be appropriate to the tasks proposed and recommends approval of the project. The DHEAG considers that the investigator(s) has/have the necessary qualifications, experience and facilities to conduct the research set out in the attached application, and to deal with any emergencies and contingencies that may arise.

Comments/Provisos:

Signature(s):

Chair of DHEAG

Date 26./7./00

Print name of Chair in block letters

[

David

]

DECLARATION BY HEAD OF DEPARTMENT

DATE APPLICATION RECEIVED: ..........J.........

☐ TECHNICAL REVIEW COMPLETED ☐ ETHICAL REVIEW COMPLETED

I have reviewed this project and consider the methodological, technical and ethical aspects of the proposal to be appropriate to the tasks proposed and recommend approval of the project. I consider that the investigator(s) has/have the necessary qualifications, experience and facilities to conduct the research set out in the attached application, and to deal with any emergencies and contingencies that may arise. This project has the approval and support of this Department/School/Centre.

Signature(s):

Head of Department

Date 26./7./00

Print name in block letters

HUMAN ETHICS SUB-COMMITTEE USE ONLY

Date application received: 26/5/00

Period of approval: From: 21/5/00 To: 24/7/00

Comments/Provisos:

☐ see attached letter

Additional information received and approved

Date 27/8/00

Signature(s): (Executive Officer, Human Research Ethics)

Date PI notified: 27/8/00

EXECUTIVE OFFICER
HUMAN RESEARCH ETHICS
You are invited to participate in this research project investigating sexual behaviour and safe sex among young adults. You do not have to be sexually active to become a participant.

In a small group of other students, we would like to discuss with you your views about normative beliefs and behaviour related to intimate relationships, sexual relationships and safe sex practices in your group.

Please remember that although we ask you to be honest, your answer does not have to come from your personal experience. We are interested in you as the representative of your peer group. In other words, we want you to be the voice of your peer group regarding your peers’ sexual beliefs and behaviours. There are no right or wrong answers in this focus group discussion.

We recognise that some of the questions asked are quite personal and we do not wish you to participate if this is a problem to you. On the other hand, the information collected is very important and your involvement is very much appreciated. This information is required so sexual education and sexual health promotion programs can be developed. We also believed you may find the questionnaire interesting and informative yourself. We hope that you will agree to participate.

If you do, please read and sign the attached consent form and return it to us before we begin the focus group.

The discussion will take approximately 90 minutes and will be audio-tape recorded. After information you provide is strictly confidential and there will be no analyses of individual data.

Your participation is completely voluntary and non-participation will have no effect on your grade as a student in the subject you are enrolled. You are free to discontinue participation in this study at any time.

Any questions or advice concerning this study may be directed to:

- Simon. Phone: 7524035. E-mail: simon@pgrad.unimelb.edu.au
- A/Prof. Susan Paxton at the Department of Psychology, University of Melbourne, Parkville 3010, Australia. Phone (+61 3) 8344 6307. E-mail: s.paxton@psych.unimelb.edu.au

If you have any queries or complaints about this study to which you do not receive a satisfactory answer, please write to the “Human Research Ethics Committee”, University of Melbourne, Vic 3010, Australia, phone (+61 3) 8344 7507.

Simon       A/Prof. Susan Paxton
University of Melbourne       University of Melbourne
Translation of Information Sheet for focus group
Lembar Informasi untuk Diskusi Kelompok Fokus
Perilaku seksual di kalangan remaja akhir

Anda kami ajak untuk berpartisipasi dalam proyek penelitian tentang perilaku seksual dan seks yang aman di kalangan remaja akhir. Anda tidak harus aktif secara seksual (dalam arti pemah melakukan hubungan seks) untuk bisa menjadi partisipan penelitian ini. Di dalam kelompok kecil, kami meminta Anda untuk berdiskusi beberapa hal tentang pendapat (belief) normatif dan perilaku akan hubungan intim, hubungan seks dan praktek seks yang aman.


Kami menyadari bahwa beberapa pertanyaan yang kami ajukan cukup personal dan kami tidak ingin Anda berpartisipasi jika hal tersebut menjadi persoalan bagi Anda. Di lain pihak, informasi yang Anda berikan sangat penting dan partisipasi Anda sangat kami hargai. Informasi-informasi yang kami kumpulkan dalam penelitian ini kita butuhkan, agar pendidikan seks dan program promosi kesehatan seksual dapat kita kembangkan secara lebih baik. Kami juga percaya bahwa Anda mungkin akan menemukan hal-hal yang menarik dan informatif dalam kuesioner ini.

Jika Anda setuju untuk berpartisipasi, silakan membaca dan menandatangani lembar kesediaan berpartisipasi yang sudah kami sediakan, dan mengembalikannya sebelum kita memulai diskusi. Waktu yang dibutuhkan dalam diskusi ini kira-kira selama 90 menit dan akan direkam secara audio. Semua informasi yang Anda berikan adalah rahasia sifatnya dan tidak akan ada analisis data secara individual.

Partisipasi Anda bersifat sukarela dan jika Anda tidak berpartisipasi, hal tersebut tidak akan mempengaruhi nilai Anda di mata kuliah yang sedang Anda ikuti. Anda bebas untuk tidak melanjutkan partisipasi dalam penelitian ini setiap saat. Jika Anda memiliki pertanyaan atau saran sehingga dengan penelitian ini, silakan menghubungi:

- Simon. Telp: 7524035. E-mail: simon@pgrad.unimelb.edu.au
- A/Prof. Susan Paxton, Department of Psychology, University of Melbourne, Parkville 3010, Australia. Telp (+61 3) 8344 6307. E-mail: s.paxton@psych.unimelb.edu.au

Jika Anda memiliki pertanyaan lebih lanjut dan ingin mengajukan keberatan akan penelitian ini yang mana Anda belum mendapatkan jawaban yang memuaskan, silakan menulis surat yang ditujukan pada: Human Research Ethics Committee, University of Melbourne, Vic 3010, Australia, telp (+61 3) 8344 7507.

Simon
University of Melbourne

A/Prof. Susan Paxton
University of Melbourne
Appendix D

Consent form for persons participating in research projects:
Sexual risk behaviour among Indonesian heterosexual young adults (focus group)

Investigators: A/Prof. Susan J. Paxton & Simon

Name of participant:

1. I consent to participate in the above project, the particulars of which - including details of procedures - have been explained to me and are appended hereto.
2. I authorise the investigator or his or her assistant to use with me the procedures referred to under (1) above.
3. I acknowledge that:
   a. the possible effects of the procedures have been explained to me to my satisfaction;
   b. I have been informed that I am free to withdraw from the project at any time and to withdraw any unprocessed data previously supplied;
   c. The project is for the purpose of research and not for treatment;
   d. I have been informed that the confidentiality of the information I provide will be safeguarded subject to any legal requirements.

Signature                                  Date
(Participant)
Translation of Consent Form

Lembar kesediaan untuk berpartisipasi dalam penelitian:
Perilaku seksual di kalangan remaja akhir (diskusi kelompok fokus)

Peneliti: A/Prof. Susan J. Paxton & Simon

Name partisipan:

1. Saya bersedia untuk berpartisipasi dalam proyek penelitian seperti yang disebutkan di atas - terutama yang menyangkut prosedur telah dijelaskan secara rinci kepada saya.
2. Saya memberi wewenang pada peneliti atau asistennya untuk menjalankan prosedur penelitian pada diri saya seperti yang dimaksud dalam poin (1) di atas.
3. Saya mengetahui:
   a. akan kemungkinan dampak dari prosedur penelitian yang telah dijelaskan secara jelas kepada saya;
   b. bahwa saya bebas setiap saat untuk tidak melanjutkan partisipasi dalam penelitian ini dan dapat menarik semua data yang belum diproses yang telah saya berikan sebelumnya;
   c. bahwa proyek ini dimaksudkan sebagai penelitian dan bukan merupakan perlakuan,
   d. bahwa informasi yang saya berikan dijamin kerahasiaannya sesuai ketentuan hukum yang berlaku.

Tanda tangan                                  Tanggal
(Partisipan)
Appendix E

Questionnaires

(Next page)
Lembar Informasi
studi tentang perilaku seksual

Para partisipan yang kami hormati,
Kami mengharapkan kesediaan Anda untuk mengisi kuesioner yang berkisar tentang sikap terhadap seksualitas, pengetahuan akan penyakit seksual menular, dan intensi untuk menggunakan kondom. Harap selalu diingat, bahwa tidak ada jawaban yang benar atau salah dalam penelitian ini. Yang sungguh kami harapkan adalah kejujuran Anda. Anda tidak harus aktif secara seksual (pernah berhubungan seks) untuk dapat menjadi partisipan penelitian ini.

Kesediaan Anda untuk berpartisipasi dalam penelitian ini, sepenuhnya sukarela dan tidak akan berpengaruh terhadap nilai mata kuliah yang sedang Anda ikuti. Sekalipun sukarela sifatnya, namun kami sungguh sangat mengharapkan bantuan Anda.

Penelitian ini berangkat dari sebuah keprihatinan akan tingginya angka HIV/AIDS pada kalangan remaja serta meningkatnya angka kehamilan sebelum menikah. Maka penelitian ini mencoba mencari tahu dan memahami faktor-faktor psikologis, sosial budaya dan kontekstual yang mempengaruhi perilaku seksual dan seks yang aman. Dengan demikian informasi yang dikumpulkan dalam penelitian ini adalah sangat penting karena akan digunakan untuk mengembangkan program pendidikan seks dan promosi kesehatan reproduksi yang lebih baik dan lebih tepat.

Kuesioner ini akan terbagi menjadi dua bagian. Kuesioner I membutuhkan waktu kira-kira 30 menit dan Kuesioner II selama 10 menit. Anda dimohon untuk mengembalikan Kuesioner I pada pertemuan kelas minggu depan (______) dan Kuesioner II pada empat minggu berikutnya, yakni: ______

Semua informasi yang Anda berikan sepenuhnya bersifat anonimus dan bahkan kami tak akan pernah bisa mengetahui siapa Anda dan apa jawaban Anda. Untuk menjamin kerahasiaan identitas Anda itu pula, kami tidak meminta Anda untuk menandatangani lembar kesediaan berpartisipasi. Semua kuesioner yang kembali akan kami anggap sebagai bentuk kesediaan partisipasi Anda.

Kami akan melakukan analisis terhadap data yang Anda berikan, namun semua analisis akan dilakukan sebagai kelompok dan tidak akan ada analisis individual.

Jika Anda memiliki pertanyaan atau saran, silakan menghubungi:
- Simon, M.Sc; telp. (031) 752 1182 – e.mail: simon@pgrad.unimelb.edu.au
- A/Prof. Susan Paxton; Department of Psychology, University of Melbourne, Vic 3010, Australia – e.mail: a.paxton@psych.unimelb.edu.au

Jika Anda ingin mengajukan pertanyaan lebih lanjut atau keluhan, silakan menghubungi: “Human Research Ethics Committee”, University of Melbourne, Vic 3010, Australia; telp. +61 3 8344 7507.

Simon, M.Sc
University of Melbourne

A/Prof. Susan Paxton
University of Melbourne
Translation of Information Sheet
Study of sexual behaviour

You are invited to participate in this research project investigating sexual behaviour and safe sex among young adults. You do not have to be sexually active to become a participant.

We would like you to complete questionnaires about attitudes towards sexually related matters, aspects of sexual behaviour, knowledge of sexually transmitted disease and intention to use condoms. There are no right or wrong answers in the questionnaires.

We recognise that some of the questions asked are quite personal and we do not wish you to participate if this is a problem to you. On the other hand, the information collected is very important and your involvement is very much appreciated. This information is required so sexual education and sexual health promotion programs can be developed. We also believe you may find the questionnaire interesting and informative yourself. We hope that you will agree to participate.

If you do, the questionnaires will take approximately 30 minutes to complete Questionnaire I and 10 minutes for Questionnaire 2. All information you provide is totally anonymous and you cannot be identified from the completed questionnaires. We do not ask you to sign a written consent form. All returning questionnaires will be treated as a form of consent from you. The information you give will be pooled to provide statistics about the group as a whole and there will be no analyses of individual data.

Your participation is completely voluntary and non-participation will have no effect on your grade as a student in the subject you are enrolled. You are free to discontinue participation in this study at any time.

Any questions or advice concerning this study may be directed to:

- Simon. Phone: 7524035. E-mail: simon@pgrad.unimelb.edu.au
- A/Prof. Susan Paxton at the Department of Psychology, University of Melbourne, Parkville 3010, Australia. Phone (+61 3) 8344 6307. E-mail: s.paxton@psych.unimelb.edu.au

If you have any queries or complaints about this study to which you do not receive a satisfactory answer, please write to the “Human Research Ethics Committee”, University of Melbourne, Vic 3010, Australia, phone (+61 3) 8344 7507.

Simon
University of Melbourne

A/Prof. Susan Paxton
University of Melbourne
QUESTIONNAIRE 1 Part A

Please write your answer or tick (√) the answer that apply to you

1. What is your age? ..............................................................................................................

2. What is your sex?
   □ Male
   □ Female

3. Are you
   □ University student
   □ Short-course (outside university) student
   □ Both, university & short-course student

4. Do you work?
   □ Yes
   □ No

   If yes, please specify ......................................................................................................

5. What is your ethnic background?
   □ Javanese
   □ Indonesian Chinese
   □ Other, please specify: ..................................................................................................

6. Do you go to mosque/church/temple regularly?
   □ Very likely
   □ Fairly likely
   □ Sometimes
   □ Fairly unlikely
   □ Very unlikely

7. Do you pray/shalat everyday?
   □ Always
   □ Often
   □ Sometimes
   □ Seldom
   □ Never

8. Do you regards yourself as a religious person?
   □ Yes, very much
   □ Yes, fairly
   □ A little bit
   □ Not much
   □ Not at all

1 The actual questionnaire was in Indonesian language (Bahasa Indonesia)
9. What is (or was) your father’s occupation? ..............................................................

10. What is (or was) your mother’s occupation? ...........................................................

11. What is your father’s level of education? ............................................................... 

12. What is your mother’s level of education? ..............................................................

13. What is your electricity power limit (in watt)? .....................................................

14. How many motorcycles does your family have? ......................................................

15. Do you have your private motorcycle (provided by family)?
   - Yes
   - No

16. How many cars does your family have? .................................................................

17. Do you have your own private car (provided by family)?
   - Yes
   - No

18. What does “sexual relationship” mean to you?
........................................................................................................................................

19. What is your opinion about sex before marriage?
........................................................................................................................................

20. Please describe how your friends see (opinion about) sex before marriage
........................................................................................................................................

21. How many men your age do you think have had sex (out of ten)? .........................
   - 1-2
   - 3-4
   - 5-6
   - 7-8
   - 9-10

22. How many women your age do you think have had sex (out of ten)? .....................
   - 1-2
   - 3-4
   - 5-6
   - 7-8
   - 9-10
23. At what age do you think most men start having sex? ..............................
   □ Below 16
   □ 17-18
   □ 19-20
   □ 21-22
   □ Above 22

24. At what age do you think most women start having sex? ..........................
   □ Below 16
   □ 17-18
   □ 19-20
   □ 21-22
   □ Above 22

25. Do you think that men who have a girlfriend sometimes have sex with others?
   □ Always
   □ Often
   □ Sometimes
   □ Seldom
   □ Never

26. Do you think that women who have a boyfriend sometimes have sex with others?
   □ Always
   □ Often
   □ Sometimes
   □ Seldom
   □ Never

27. Do you think that people about the same age as you mostly use condoms if they have sex?
   □ Always
   □ Often
   □ Sometimes
   □ Seldom
   □ Never

28. For those young people who use condoms when having sex, who do you think mostly
    suggests using a condom?
   □ Man
   □ Woman

29. Have you ever attend/participate in sex education?
   □ Yes
   □ No

30. Approximately, how many times did you attended/participated in sex education in the last 6 months?  .................
31. In your perception, do/did you have a good communication with your father?
   - Very good
   - Fairly good
   - Neither good nor bad
   - Fairly bad
   - Very bad

32. In your perception, do/did you have a good communication with your mother?
   - Very good
   - Fairly good
   - Neither good nor bad
   - Fairly bad
   - Very bad

33. In your perception, do you have a good communication with your brother(s)/sister(s)?
   - Very good
   - Fairly good
   - Neither good nor bad
   - Fairly bad
   - Very bad

34. Do your parents live togethers?
   - Yes
   - No, because (please specify) …………………………………………………………………………..

35. In general, are you psychologically satisfied with your family situation?
   - Very satisfied
   - Fairly satisfied
   - Neither satisfied nor dissatisfied
   - Fairly dissatisfied
   - Very dissatisfied

   Please describe the reason of your answer ……………………………………………………………..

36. Compared to your friends, do you think your parents discipline you appropriately?
   - Too much discipline
   - Fairly much
   - Neither too much nor too little
   - Fairly little
   - Too little
37. Have you ever talked about sex with (please tick a box or boxes): (Replace)

☐ Your mother (or female guardian)  ☐ Other relative (eg. cousin, uncle, etc.)
☐ Your father (or male guardian)  ☐ A doctor
☐ Your boyfriend/girlfriend  ☐ A school teacher in a class
☐ A friend’s parent  ☐ A school teacher privately
☐ A male friend  ☐ Religious leader
☐ A female friend  ☐ No one
☐ Your brother/sister  ☐ Other, please specify

........................................................................................................

In these following questions, we are interested in your knowledge about AIDS and other STIs. Please tick (√) the answer that you believe correct.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Could a person get HIV (AIDS virus) by sharing a needle and syringe with someone when injecting drugs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Could a woman get HIV through having sex with a man?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. If someone with HIV coughs or sneezes near other people, could they get the virus?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Could a person get HIV from mosquitoes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. If a woman with HIV pregnant, could her baby become infected with HIV?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Could a person get HIV by hugging someone who has it?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. If condoms are used during sex, does this help to protect people from getting HIV?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Could someone who looks very healthy pass on HIV infection?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Please write down as many STIs as you know:

10. Please write down as many symptoms of STIs that you know:

In these following questions, we are interested in your understanding about safe sex. Please write your answer.

11. What does “safe sex” mean to you?
........................................................................................................
........................................................................................................

12. What strategies do you know of avoiding STIs?

13. From those strategies above, which strategies are you most likely to choose? (please place the number 1 beside the most strategy, number 2 for the second, and so on)
**Definition**

- **Boyfriend/girlfriend**: someone that you love
- **Regular partner**: someone with whom you have a frequently sexual relationship
- **Casual partner**: someone you have had sex with once or infrequently
- **Vaginal sex**: the man’s penis in the woman’s vagina
- **Anal sex**: the man’s penis in the woman’s anus
- **Oral sex**: mouth to genital touching
- **Petting**: non penetrative sex

In this section we are interested in whether you have ever done any of the following activities, please tick (✓) in one box for each activity

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Done regularly</th>
<th>Done once or rarely</th>
<th>Never done it</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Vaginal sex with boyfriend/girlfriend</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2.</td>
<td>Vaginal sex with one regular partner who is not your boyfriend/girlfriend</td>
<td>☐</td>
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<tr>
<td>3.</td>
<td>Vaginal sex with a casual partner who is a Commercial Sex Worker (CSW)</td>
<td>☐</td>
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<td>4.</td>
<td>Vaginal sex with a casual partner who is not a CSW</td>
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<td>5.</td>
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<tr>
<td>13.</td>
<td>Petting with boyfriend/girlfriend</td>
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<td>14.</td>
<td>Petting with one regular partner who is not your boyfriend/girlfriend</td>
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<tr>
<td>15.</td>
<td>Petting with a casual partner who is a CSW</td>
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<tr>
<td>16.</td>
<td>Petting with a casual partner who is not a CSW</td>
<td>☐</td>
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</tr>
</tbody>
</table>

For those who HAVE DONE any of the sexual activities described above, please continue on next page. For those who NEVER DO any of the sexual activities, please GO to page .... (in this Appendix, p. 302).
In this section, we are interested in whether you have used a condom. Please answer by tick (✓) in one box for each activity.

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Always used a condom</th>
<th>Sometimes used a condom</th>
<th>Never used a condom</th>
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<tr>
<td>3.</td>
<td>Vaginal sex with a casual partner who is a CSW</td>
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<tr>
<td>4.</td>
<td>Vaginal sex with a casual partner who is not a CSW</td>
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<td>5.</td>
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<tr>
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<td>Oral sex with a casual partner who is not a CSW</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Please write your answer or tick (√) the answer that apply to you

1. What was your age when you had your first sexual relationship? ............................

2. Who was your first sexual partner?
   ☐ Boyfriend/girlfriend
   ☐ Casual partner
   ☐ Commercial sex worker
   ☐ Other, please specify .............................

3. Where was the place of your first sexual intercourse? .................................

4. If you look back to your first sexual relationship, what was the reason for doing it?
   ..........................................................................................................................

5. What are the main reasons you have sexual intercourse thereafter?
   ..........................................................................................................................

6. Approximately, how many sexual partners have you had? ..........................

7. Approximately, how many sexual partners have you had in the last 6 months?
   ..........................................................................................................................

8. Have you had sexual experience with someone of the same sex?
   ☐ Yes
   ☐ No

9. In what percentage (approximately) of your previous sexual encounters have you or your partner(s) worn a condom? ..........................
   ..........................................................................................................................

10. Have you ever ended up not using a condom (even though you had one with you) because you were too drunk or high at the time?
    ☐ Yes
    ☐ No

11. Have you ever ended up not using a condom (even though you had one with you) because you were too aroused at the time?
    ☐ Yes
    ☐ No

12. Do you use any other method of birth control other than a condom?
    ☐ Yes, with all partners
    ☐ Yes, with some partners
    ☐ No
If you answer “yes”, please write the method used and the reason why you chose it

13. Have you ever had STI symptoms?
   ☐ Yes
   ☐ No
   If yes, what did you do at that time? .................................................................

14. Have you had a STI as diagnosed by a doctor?
   ☐ Yes
   ☐ No

In this section we are interested in your concern about HIV/AIDS.
Please tick (✓) in the appropriate box for each question

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Not at all</th>
<th>Slightly concerned</th>
<th>Moderately concerned</th>
<th>Fairly concerned</th>
<th>Very concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To what extent do you think you are vulnerable to be infected by HIV?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2.</td>
<td>To what extent do you think you are vulnerable to STI (apart from AIDS)?</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3.</td>
<td>To what extent were you concerned about (you or your partner) becoming pregnant?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Please tick (√) the appropriate box

In view of the risk of getting AIDS/STI, have you ever asked your partner about his/her experiences

Yes  No  If you answer yes, what was/were the type of partner(s) that you asked:

1. Previous sexual partner(s)
   - [ ] Boyfriend/girlfriend
   - [ ] Regular partner
   - [ ] Casual CSW partner
   - [ ] Casual Non-CSW partner

2. Injected drugs
   - [ ] Boyfriend/girlfriend
   - [ ] Regular partner
   - [ ] Casual CSW partner
   - [ ] Casual Non-CSW partner

3. Blood transfusions
   - [ ] Boyfriend/girlfriend
   - [ ] Regular partner
   - [ ] Casual CSW partner
   - [ ] Casual Non-CSW partner

Please tick (√) the appropriate box

Have you ever refused to engage in sexual intercourse with a partner who objected to using a condom?

Yes  No  Partner never objected to using a condom  Not applicable. Have not had this type of partner

- Boyfriend/girlfriend
- Regular partner
- Casual CSW partner
- Casual Non-CSW partner
Please rate your degree of confidence if you were asked to do them today.

1 : Absolutely not confident
2 : Not confident
3 : Uncertain
4 : Confident
5 : Absolutely Confident

<table>
<thead>
<tr>
<th>I feel confident that I can :</th>
<th>Confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>1. Refuse a sexual advance from my partner</td>
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<td>5. Discuss using condoms and/or other contraceptives with a potential partner</td>
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<tr>
<td>6. Ask a potential partner to wait if precautions are not available at the time</td>
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<td>7. Carry condoms around with me</td>
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<td>15. Discuss precautions with a doctor or health professional</td>
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<td>17. Ask someone other than my partner for a date</td>
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<td>18. Ask my partner to provide sexual stimulation I require</td>
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<td>20. Have a regular STI check ups if having sex more than one partner</td>
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<td>21. Look for STI signs before deciding to have sex with anyone</td>
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<td>22. Limit my sexual activity to just one partner because of STI risk</td>
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</tr>
<tr>
<td>23. Avoid sexual contact if I thought there was a slight chance of getting an STI</td>
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</table>

Please continue to Questionnaire 1 Part B (in this Appendix, p. 306)
For those who have NEVER DONE any of the sexual activities as described above, we are interested in whether you believe you will use a condom in the future in these following situation.

Please answer by tick (✓) in one box for each activity

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Always used a condom</th>
<th>Sometimes used a condom</th>
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<td>☐</td>
<td>☐</td>
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<td>3.</td>
<td>Vaginal sex with a casual partner who is a CSW</td>
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<tr>
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<td>Vaginal sex with a casual partner who is not a CSW</td>
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<td>7.</td>
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<td>12.</td>
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<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Please rate your degree of confidence if you were asked to do them today.
Since you don’t have a sexual partner, please answer the questions AS IF you have one.

<table>
<thead>
<tr>
<th>Confidence</th>
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</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>4</td>
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<tr>
<td>5</td>
</tr>
</tbody>
</table>

<table>
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<tr>
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I feel confident that I can:

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<thead>
<tr>
<th>Confidence</th>
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<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<tbody>
<tr>
<td>24. Limit my sexual activity to just one partner because of STI risk</td>
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<tr>
<td>25. Avoid sexual contact if I thought there was a slight chance of getting an STI</td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

Please write your answer or tick (√) the answer that apply to you

1. You may have chosen not had sexual intercourse. What are your main reasons of this choice?  
   ..........................................................................................................................................................................................................................................................................

2. Do you think you will have a sexual relationship with someone of the same sex?  
   ☐ Yes  
   ☐ No

3. Do you think you will use any other method of birth control other than condom?  
   ☐ Yes, with all partners  
   ☐ Yes, with some partners  
   ☐ No

   If you answer “yes”, please write the method you prefer and the reason why you would choose it  
   ..........................................................................................................................................................................................................................................................................

In this section we are interested in your concern about HIV/AIDS.  
Please tick (√) in the appropriate box for each question

<table>
<thead>
<tr>
<th>No.</th>
<th>Questions</th>
<th>Not at all</th>
<th>Slightly concerned</th>
<th>Moderately concerned</th>
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<th>Very concerned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>To what extent do you think you are vulnerable to be infected by HIV?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2.</td>
<td>To what extent do you think you are vulnerable to STI (apart from AIDS)?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3.</td>
<td>To what extent were you concerned about (you or your partner) becoming pregnant?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Please tick (✓) the appropriate box

**In view of the risk of getting AIDS/STI, will you ask your partner about his/her experiences**

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
<th>If you answer yes, what is/are the type of partner(s) that you will ask:</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐</td>
<td>☐</td>
<td>☐ Boyfriend/girlfriend</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Regular partner</td>
</tr>
<tr>
<td></td>
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<td>☐ Casual CSW partner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>☐ Casual Non-CSW partner</td>
</tr>
</tbody>
</table>

1. Previous sexual partner(s) ☐ ☐ ☐ Boyfriend/girlfriend
   ☐ Regular partner
   ☐ Casual CSW partner
   ☐ Casual Non-CSW partner

2. Injected drugs ☐ ☐ ☐ Boyfriend/girlfriend
   ☐ Regular partner
   ☐ Casual CSW partner
   ☐ Casual Non-CSW partner

3. Blood transfusions ☐ ☐ ☐ Boyfriend/girlfriend
   ☐ Regular partner
   ☐ Casual CSW partner
   ☐ Casual Non-CSW partner

Will you refuse to engage in sexual intercourse with a partner who objected to using a condom? Please tick (✓) the appropriate box, if applicable

<table>
<thead>
<tr>
<th>Yes</th>
<th>No</th>
</tr>
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<tbody>
<tr>
<td>☐ Boyfriend/girlfriend</td>
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</table>

Please continue to Questionnaire 1 Part B (in this Appendix, p. 306)
Appendix F

**QUESTIONNAIRE 1 Part B²**

*General attitudes towards condoms*

Please signify your agreement or disagreement with the following statements by circling the appropriate number:

1: Strongly agree
2: Agree
3: Neither agree nor disagree or not sure
4: Disagree
5: Strongly disagree

1. If someone suggested we should use a condom I would think they didn’t trust me
   
2. To most people, a man who uses a condom is sexier than one who leaves the protection up to a woman
   
3. I can really relax if we use a condom
   
4. There is no reason why a woman would be embarrassed to suggest a condom
   
5. Condoms interfere with the enjoyment of sex
   
6. Using condoms prevent me from getting a sexual disease
   
7. Condoms are hard to use
   
8. Suggesting condoms with new sexual partner might make them think I suspect they have AIDS or STI
   
9. I really don’t mind using condoms
   
10. I am too embarrassed to suggest to a new sexual partner that we use condom
   
11. Using condoms makes me feel safe
   
12. Suggesting condoms with a new partner might make them think I have AIDS or STI
   
13. Condoms are a good form of contraception

² The actual questionnaire was in Indonesian language (Bahasa Indonesia)
14. A man who uses a condom cares about his partner 1 2 3 4 5
15. In a new relationship I would want to use a condom 1 2 3 4 5

Prior intention measurement

Please read each statement carefully. Please tick (✓) in the place that best describes your opinion. For example:

The weather in Surabaya is

extremely good fairly good neither good fairly bad extremely bad nor bad

If you think the weather in Surabaya is fairly bad, then you would place your mark as follows:

The weather in Surabaya is

✓

extremely good fairly good neither good fairly bad extremely bad nor bad

Before proceeding, please think of a type of partner when you fill out this questionnaire. Is your partner:

☐ Boyfriend/girlfriend
☐ Regular partner
☐ Casual CSW partner
☐ Casual Non-CSW partner
☐ ....................

Please tick (✓) in the place above that best describes the type of your partner.
Questions

1. I intend to ensure my sexual partner or I use condoms in the next sexual encounter
   ______ ; ______ ; ______ ; ______ ; ______
   definitely  probably  possibly  probably not  definitely not

2. I am determined that my sexual partner or I will use condoms in the next sexual encounter
   ______ ; ______ ; ______ ; ______ ; ______
   definitely  probably  possibly  probably not  definitely not

3. I think that if my sexual partner or I use condoms in the next sexual encounter, it is
   ______ ; ______ ; ______ ; ______ ; ______
   very wise  fairly wise  neither wise or foolish  fairly foolish  very foolish

   ______ ; ______ ; ______ ; ______ ; ______
   very pleasant  fairly pleasant  neither pleasant or unpleasant  fairly unpleasant  very unpleasant

   ______ ; ______ ; ______ ; ______ ; ______
   very responsible  fairly responsible  neither responsible or irresponsible  fairly irresponsible  very irresponsible

   ______ ; ______ ; ______ ; ______ ; ______
   very useful  fairly useful  neither useful or useless  fairly useless  very useless

   ______ ; ______ ; ______ ; ______ ; ______
   very arousing  fairly arousing  neither arousing nor off-putting  fairly off-putting  very off-putting

   ______ ; ______ ; ______ ; ______ ; ______
   very natural  fairly natural  neither natural or unnatural  fairly unnatural  very unnatural

   ______ ; ______ ; ______ ; ______ ; ______
   very good  fairly good  neither good nor bad  fairly bad  very bad

   ______ ; ______ ; ______ ; ______ ; ______
   very safe  fairly safe  neither safe nor unsafe  fairly unsafe  very unsafe
4. Using condoms would prevent me or my partner becoming pregnant

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

5. Using condoms would protect me from getting a sexually transmitted infection

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

6. Using condoms would protect me from getting HIV/AIDS

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

7. Using condoms would show my sexual partner I care about his/her health

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

8. Using condoms would make sex seem pre-planned

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

9. Using condoms would interfere with sex

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

10. Using condoms would introduce a feeling of distrust between me and my partner

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely

11. Using condoms would reduce sexual pleasure

very likely; fairly likely; neither likely or unlikely; fairly unlikely; very unlikely
12. Preventing me or my partner becoming pregnant is

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<tr>
<th></th>
<th>very good</th>
<th>fairly good</th>
<th>neither good</th>
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<th>very bad</th>
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13. Protecting myself from getting a sexually transmitted infection is

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14. Protecting myself from getting HIV/AIDS is

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15. Showing my sexual partner I care about his/her health is

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16. Something that makes sex seem pre-planned is

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<th>fairly bad</th>
<th>very bad</th>
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</table>

17. Something that interferes with sex is

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<th>fairly good</th>
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<th>very bad</th>
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18. Something that introduces feelings of distrust between me and my partner is

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<th>neither good</th>
<th>fairly bad</th>
<th>very bad</th>
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</table>

19. Something that reduces sexual pleasure is

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<th></th>
<th>very good</th>
<th>fairly good</th>
<th>neither good</th>
<th>fairly bad</th>
<th>very bad</th>
</tr>
</thead>
</table>

20. Most people who are important to me think my sexual partner or I should use condoms next time we have sex

_________ ; ___________ ; ___________; ___________; ___________
definitely should        should                 neither should    or should not    should not    definitely should not

definitely should

21. My sexual partner would approve of our using condoms in the next sexual encounter

_________ ; ___________ ; ___________; ___________; ___________
very likely           fairly likely           neither likely        fairly unlikely        very unlikely

or unlikely

22. My friends think using condoms good

very likely           fairly likely           neither likely        fairly unlikely        very unlikely

23. Regarding condom use, I would like to do what my sexual partner thinks I should do

very likely           fairly likely           neither likely        fairly unlikely        very unlikely

24. Regarding condom use, I would like to do what my friends think I should do

very likely           fairly likely           neither likely        fairly unlikely        very unlikely

25. Using condoms or not during sex would be up to me

very likely           fairly likely           neither likely        fairly unlikely        very unlikely

26. Whether my sexual partner and I use condoms or not during sex would depend on me

very likely           fairly likely           neither likely        fairly unlikely        very unlikely

27. I know where to buy condoms

Strongly agree

Somewhat agree

Neither agree or disagree

Somewhat disagree

Strongly disagree
28. For me, dealing with the embarrassment of actually buying condoms would be

__________; __________; __________; __________; __________

very easy    fairly easy    neither easy    fairly hard    very hard

or hard

29. For me, discussing condom use with my sexual partner is not a problem

__________; __________; __________; __________; __________

Strongly agree    Somewhat agree    Neither agree or disagree    Somewhat disagree    Strongly disagree

30. For me, convincing my sexual partner to use condoms would be

__________; __________; __________; __________; __________

very easy    fairly easy    neither easy    fairly hard    very hard

or hard

31. I can always carry condoms with me

__________; __________; __________; __________; __________

Strongly agree    Somewhat agree    Neither agree or disagree    Somewhat disagree    Strongly disagree

32. For me, knowing how to use a condom correctly would be

__________; __________; __________; __________; __________

very easy    fairly easy    neither easy    fairly hard    very hard

or hard
Appendix G

QUESTIONNAIRE 2

Please tick (✓) a box that apply to you:

☐ I have had sex (ie. vaginal, anal, oral, petting) since I completed the Questionnaire 1
⇒ PLEASE ANSWER ALL THESE REMAINING QUESTIONS

☐ I have not had sex since I completed the Questionnaire 1
⇒ PLEASE ANSWER HERE of this question: Why have you abstained from sex since you completed the Questionnaire 1?

………………………………………………………………………………………………

☐ I have never engaged in a sexual relationship
⇒ PLEASE STOP HERE, THANK YOU.

Please reflect about your last sexual experience. With this in mind, please answer the following questions:

1. How would you describe your partner for that sexual encounter?
   ☐ Boyfriend/girlfriend
   ☐ Regular partner
   ☐ Casual CSW partner
   ☐ Casual Non-CSW partner
   ☐ ……………..

2. Which of the following behaviours best describes what occurred during the sexual encounter (tick appropriate box or boxes)
   ☐ Vaginal sex
   ☐ Anal sex
   ☐ Oral sex
   ☐ Petting

3. Before the sexual encounter, how strong were your intentions to have a sexual encounter with your partner?
   ☐ Not at all strong
   ☐ Slightly strong
   ☐ Moderately strong
   ☐ Fairly strong
   ☐ Very strong
4. Were you or your partner
☐ Unaffected by alcohol
☐ Moderately affected by alcohol
☐ Strongly affected by alcohol

5. Were you or your partner
☐ Unaffected by drug
☐ Moderately affected by drug
☐ Strongly affected by drug

6. At the beginning of this sexual encounter:

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<tr>
<th></th>
<th>Not at all</th>
<th>Slightly</th>
<th>Moderately</th>
<th>Fairly</th>
<th>Great deal</th>
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</thead>
<tbody>
<tr>
<td>How sexually attracted were you to your sexual partner?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>To what extent did you want a sexual encounter with your partner?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>How happy were you?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>To what extent did you want to have exciting sex?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>How strong were your intentions about using a condom?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

7. During this sexual encounter did you and your partner have a condom available?
☐ Yes
☐ No

8. If you and your partner had a condom available during this sexual encounter, did you use the condom?
☐ Yes
☐ No

9. If you and your partner used a condom on this sexual encounter, which of the following statements best describes what happened (tick appropriate box or boxes)
☐ I was afraid of AIDS
☐ I was afraid of STI
☐ I was afraid of pregnancy
☐ I was conscious of using it all the time
☐ It made the encounter more pleasurable
☐ It made the encounter less pleasurable
☐ It made the encounter longer
☐ It broke
☐ It fell off
☐ It made no difference
☐ Others, please specify .................................................................

If a condom was not used, which of the following statements best describes what happened (tick appropriate box or boxes)
☐ We trust each other that we are clean
☐ Long term relationship, and we never infected by any STIs
☐ Other methods of pregnancy control used
☐ Too drunk or high to think about it
☐ Tested/checked for HIV/STIs
☐ Don’t know about condom
☐ Forgot
☐ No control over situation
☐ Perceived low risk of STIs
☐ Perceived low risk of pregnancy
☐ Condom was not available
☐ Partner did not want to, because (please specify) ...........................................
☐ I don’t like them, because (please specify) .....................................................
☐ We don’t like them, because (please specify) ....................................................
☐ Other reason, please specify ..........................................................................

10. Which best describes your communication with your partner about using a condom (tick appropriate box or boxes)
☐ I suggested directly that we use a condom to my partner
☐ I suggested indirectly that we use a condom to my partner
☐ My partner directly suggested that we use a condom
☐ My partner indirectly suggested that we use a condom
☐ We just knew that we wanted to use a condom
☐ I already knew that my partner wanted to use a condom
☐ My partner already knew that I wanted to use a condom
☐ Neither my partner nor I suggested that we use a condom

11. How easy did you find it to communicate with your partner about using a condom?
⇒ Tick here if you did not communicate with your partner and go to Q13  [ ]
☐ Extremely difficult
☐ Difficult
☐ Neither easy nor difficult
☐ Easy
☐ Extremely easy
12. When you communicated your feelings about using a condom, how do you think your partner felt about the suggestion?
☐ My partner was happy with the suggestion
☐ My partner was unhappy with the suggestion
☐ My partner was neither happy nor unhappy with the suggestion

13. How easy did your partner seem to find it to communicate with you about using a condom?
⇒ **Tick here if your partner did not communicate with you and go to Q15** [ ]
☐ Extremely difficult
☐ Difficult
☐ Neither easy nor difficult
☐ Easy
☐ Extremely easy

14. When your partner communicated his/her feelings about using a condom, how did you feel about the suggestion?
☐ I was happy with the suggestion
☐ I was unhappy with the suggestion
☐ I was neither happy nor unhappy with the suggestion

15. How was your feeling after this sexual relationship?
☐ Good
☐ Bad
☐ OK
☐ Used
☐ Guilty
☐ Happy
☐ Other reason (please specify) .................................................................

16. During your next sexual encounter, which of the following statements best describes your intentions about using a condom?
☐ I am very sure that I will use a condom
☐ I am sure that I will use a condom
☐ I am neither sure nor unsure that I will use a condom
☐ I am sure that I will not use a condom
☐ I am very sure that I will not use a condom
☐ I have not thought about whether I will use a condom or not
## Appendix H

Multivariate Analysis of Variance SPSS Output ($N = 750$)

<table>
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<th>Effect</th>
<th>Value</th>
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<th>Hypothesis df</th>
<th>Error df</th>
<th>Sig.</th>
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a. Exact statistic

b. Computed using alpha = .05

c. The statistic is an upper bound on $F$ that yields a lower bound on the significance level.
Appendix I

Background on Indonesia

People and government: health and development challenges

Geography

The Republic of Indonesia, which consists of approximately 17,000 islands, is located between Asia and Australia. There are five major islands: Sumatra, Java, Kalimantan, Sulawesi and Irian Jaya or Papua, bordering with Papua New Guinea. Two remaining groups of islands are Maluku and Nusa Tenggara, running from Sulawesi to Papua in the north and from Bali to Timor in the south. Other islands are small and mostly uninhabited. More than 80% of Indonesia’s territory is covered with water; the land area is about 1.9 million square kilometers. The population at the census in 2002 was approximately 220 million people.

The large number of islands and their dispersion over a wide area has given rise to a diverse culture and hundreds of ethnic groups, each with its own language, though the national language, Bahasa Indonesia, is a unifying factor. Indonesia’s climate is tropical.

with two seasons, the dry season (May to October) and the rainy season (November to April).

Governance

Indonesia is administratively divided into provinces and districts. Between 2001 and 2006, the number of provinces expanded from 27 to 33. Each province is subdivided into districts — the decentralized administrative unit, and municipalities. In 2006, there were 440 districts and 91 municipalities. Additional administrative units were sub-districts and villages. There were 5,263 sub-districts and 62,806 villages in Indonesia in 2006 (Ministry of Home Affairs, Indonesia).

Indonesia proclaimed independence from several centuries of colonial rule on 17 August 1945. Since then, the country has experienced several profound political developments. Indonesia’s founder president, Dr Soekarno, was succeeded by President Smaroeharto in 1966. A new order government was established, oriented towards directed overall development. A period of uninterrupted economic growth was experienced from 1968 to 1996, when the per capita income increased sharply from about US$ 50 to US$ 385 in 1986, and to US$ 1124 in 1996, as the national economy expanded at an annual average rate of nearly 5%. This experience was abruptly reversed by the economic crisis that affected South-East Asia in 1997.

In 1997 and 1998, Indonesia went through its worst economic crisis since independence. Economic growth reversed, to a negative 13% (BPS, 2003). After more than three decades in power, President Soeharto resigned in 1998. The political situation underwent rapid transition. Soeharto’s last vice-president, B J Habibie, succeeded him as President from 1998-1999. Further changes of national leadership followed. President Abdurrahman Wahid was in office from 1999-2001. President Megawati Soekarnoputri, daughter of the country’s first President Soekarno, led the government from 2001-2004. Historic presidential elections took place in October 2004, direct for the first time, when the current president, HE Susilo Bambang Yudhoyono, came to office. Since 2000, the economy has been growing at an annual rate ranging between 4% and 6%. Health and education have received more attention, as reflected in the increasing national budgets for these sectors.

United Nations Millennium Development Goals

In September 2000, at the United Nations (UN) Millennium Summit, the Government of Indonesia signed the Millennium Declaration and committed itself to work towards the attainment of the UN Millennium Development Goals (MDGs). This commitment is reflected in the national development plan propenas and in strategies to reduce poverty — at national and sub-national levels — aimed at achieving these goals.

Decentralization – transfer of administrative authority

Decentralization was implemented in 2001 following new rules for fiscal transfers between different levels of administration. The decision to decentralize administrative
authority directly to district governments created confusion regarding the roles of different levels of administration in health development, the provincial level in particular. Districts were given full discretion in prioritizing sectors for development. In many districts health problems did not get sufficient attention or funding, as reflected by the near collapse of surveillance systems, one of the backbones of disease control. Acknowledging this situation, renewed efforts were made by the government to address implementation issues by revising the legislation governing decentralization in 2004. It is expected that the new laws and regulations will better address the problems of implementation of decentralization.

Health priorities and programmes

The Health Law number 23, enacted in 1992, provided the legal basis for health sector activities. It stipulated that the goal of health programmes and development is to increase awareness, willingness and ability of everybody to live a healthy life. The law emphasizes the decentralization of operational responsibility and authority to the local level as a prerequisite for successful and sustainable development. In 2000, the People’s Assembly (MPR) amended the 1945 Constitution of the Republic of Indonesia to include the right of every citizen to live in a healthy environment and have access to health services and social insurance.

In mid-September 1998, a new health paradigm was introduced that focused more on health promotion and prevention rather than on curative and rehabilitative services. The new vision was reflected in the motto Healthy Indonesia 2010. In October 1999, the Ministry of Health presented the Health development plan towards healthy Indonesia 2010, which outlined the following goals:

- To lead and initiate health-oriented national development;
- To maintain and enhance individual, family, and public health, along with improving the environment;
- To maintain and enhance the quality, equitability and affordability of health services; and
- To promote public self-reliance in achieving good health. In November 2005, under the auspices of the coordinating Ministry for People’s Welfare, the Government of Indonesia held a national health conference to raise awareness among high-level political leaders and health authorities at all levels, of the high priority attached to health by the government. Following the conference, the Minister of Health launched a new policy platform for national health development at a meeting of health partners in December 2005. External partners were invited to participate in and support the development of the policy platform. As a follow-up in March 2006, the Ministry of Health issued a new Strategic plan 2005-2009 emphasizing the new vision “self-reliant communities to pursue healthy living” and its mission “to make people healthy”. The values underlying the vision and mission include: being people-oriented, rapid and appropriate response, teamwork, high integrity, and transparency and
accountability. The four pillars or priorities that form the basis of the new health approach are:

(i) Social mobilization and community empowerment, including promotion of proactive participation of individuals and communities in their own health care and the promotion of the desa siaga, or village preparedness programme.

(ii) Improvement of community access to quality care services through revitalization of the basic health system, development of effective and efficient networks, implementation of health sector quality assurance and improvements in the number and quality of human resources. Increasing access and quality of health care should be supported by adequate healthy administration, laws and regulations as well as health research and development.

(iii) Improvement of surveillance, monitoring and health information system through active community participation in reporting health problems, mobilization of funds and human resources in emergency situations, improvement of early warning system and implementation of the national pandemic preparedness plan. Health information systems at all levels need to be revised and strengthened.

(iv) Increase in health financing through identification of funds to ensure availability of resources for health; advocacy to all stakeholders in both public and private sectors; gradually increasing public financing to 15% from national and regional state budgets. Furthermore, social health insurance will be extended, starting with the implementation of a programme providing subsidized insurance for the poor.

Health profile

By the early 1990s, Indonesia had experienced an improvement in socioeconomic indicators. Life expectancy at birth reached 69 years (67 years for males and 72 years for females) in 2005 and the infant mortality rate gradually declined from 68 per 1000 in 1990 to 32 per 1000 in 2005. The proportion of population living in poverty dropped dramatically from 60% in 1970 to an estimated 17% in 2004 and the literacy rate for those aged 15 years or more was 91% in 2004. However, these achievements received a setback in mid-1997 with the economic crisis. Although the health status of Indonesians was not affected drastically in the short term, the proportion of people living in poverty rose during the period of political, economic and social instability. Most recently, poverty rates have again been reported to have declined.

Indicators show that the health situation of mothers, children and adolescents in Indonesia still has much room for improvement. Wide geographical variation exists for infant and maternal mortality. Mortality rates for children (less than five years) and infants (under one year) remain at 46 and 32 deaths per 1000 live births, respectively, although a reduction in under-five and infant mortality rates reflects progress. Nevertheless, persistent rates of death among Indonesian children within the first year of
life, one third of which occur within one month after birth, are a reflection of the quality of health care during prenatal, delivery and postnatal periods. Indeed, all three major causes of infant mortality — acute respiratory infections, perinatal complications, and diarrhoea — could be considerably reduced through quality health prevention and care.

All estimates confirm that the maternal mortality ratio (307/100 000 live births) in Indonesia is among the highest in the South-East Asia Region (Indonesia Demographic and Health Survey 2002-2003). The lifetime risk of a mother dying of causes related to childbirth is estimated to be 1 in 65 — compared with 1 in 1100 in Thailand (WHO 2002). In Indonesia, 58% of deliveries are estimated to take place at home; of those, 33% are in urban and 67% in rural areas. The rate of caesarean sections, one of the life-saving interventions in obstetrics, is 2% in rural and 7% in urban areas. Over-medicalization of deliveries is a concern in cities, while in rural areas the majority of women in need have no access to emergency services. The Ministry of Health has made advances in addressing maternal mortality by focusing on the three main areas outlined in the national 2001-2010 making pregnancy safer strategy, i.e.:

- Skilled attendance at delivery;
- Access to hospital care in case of complication; and
- Prevention of unwanted pregnancy and unsafe abortion. There has been a decline in fertility in Indonesia from 3.0 children per woman of reproductive age in 1988-1991 to 2.2 children per woman in 2005. Compared with some countries in South-East Asia, the total fertility rate in Indonesia is relatively low and a decline has taken place in most provinces. It is vital to sustain and build on these achievements. The median age at first marriage for girls is 20.2 years. While median age at first birth is 21.9 years, 16% of childbearing women are 18 years or younger. In addition, 11% of total fertility is attributable to births by the 15-19 year old age group (Indonesian demographic and health survey 2002-2003). Maternal, under-five, infant and neonatal mortalities are higher among mothers under the age of 20 compared to mothers above that age. These data demonstrate the importance of reproductive as well as adolescent health. Communicable diseases continue to be the major cause of morbidity and mortality in Indonesia. Nearly 300 people die of tuberculosis (TB) every day, with over half a million new cases estimated to occur every year (WHO report 2006: Global tuberculosis control – surveillance, planning and financing). Malaria remains a major vector-borne disease in many parts of Indonesia and large-scale outbreaks of dengue and dengue haemorrhagic fever are reported every year. Although leprosy has been eliminated at national level, Indonesia ranks third in terms of the global burden. It has overtaken Viet Nam in the number of deaths from avian influenza, with a case fatality rate in 2006 nearing 75%. The potential for origination of a pandemic is real. The re-introduction and spread of poliomyelitis in several provinces, after a period of 10 years, has pointed to weaknesses in the routine expanded programme of immunization (EPI). Thus the burden of communicable diseases — and the possibility of emerging diseases with epidemic or pandemic potential — are a major concern. Responding effectively to these complex disease patterns and potential threats to health is likely to remain a major set of challenges for the country during the coming
years. The HIV epidemic directly affects the most productive members of the society: the young people and wage-earners. At the end of 2003, an estimated 53,000 to 180,000 Indonesians were living with HIV-AIDS (UNAIDS 2004). The number of HIV-infected intravenous drug users (IDUs) increased rapidly from 16% in 1999 to 43% in 2003. The primary mode of HIV transmission is at present injecting drug use. As of December 2005, 4,700 people living with AIDS (66%) are on, or have received, antiretroviral therapy treatment (Directorate General of disease control and environmental health, Ministry of Health, Indonesia).

An epidemiological transition towards noncommunicable diseases (NCDs) is becoming a major problem and an additional challenge for Indonesia. This added burden of disease, associated with high levels of morbidity, is not limited to affluent populations in urban settings alone, but is also affecting poorer people, reducing their earning capacity and as such contributing to further impoverishment. Chronic conditions such as cancer, cardiovascular diseases, metabolic disorders and tobacco dependence represent a real burden to the country in terms of cost, suffering and human lives. In addition, Indonesia has a backlog of about two million cataract cases, leading to blindness, which needs to be addressed to reduce the social burden. NCDs are heading towards becoming a major public health problem, requiring sustained prevention and control of the risk factors involved. Indonesia has adopted WHO’s global strategy in prevention and control of NCDs. However, the major challenge ahead will be to implement the strategy and to develop multisectoral public policies in support of the strategy.

In view of the high prevalence of tobacco use in the country and given the fact that for noncommunicable diseases (NCDs) tobacco is the second most important cause of morbidity and mortality, development and implementation of an effective tobacco control programme will be emphasized. Under the Bloomberg global initiative to reduce tobacco use, efforts will be made to ensure that this initiative contributes to strengthening the tobacco control programme in the country. However, the most important challenge for Indonesia in the area of tobacco control is likely to be its accession to the WHO Framework Convention on Tobacco Control, as fellow countries of the Association of Southeast Asian Nations and of the WHO SEA Region have already done. While further support is required to achieve a majority in Indonesia’s legislative assembly, a considerable number of parliamentarians are already lobbying for the country to join the Framework Convention.

Mental health has long been neglected, despite an estimated 12.3% loss of productive days due to mental and neurological disorders. This situation was further aggravated by the tsunami of 26 December 2004, which substantially impacted the mental health of affected populations. It soon became clear that a large number of people were suffering from afflictions ranging from mild psychological distress to severe mental disorder. An additional, increasing problem among children and adolescents is that of substance abuse, while social unrest, conflict and acts of terrorism add further burden to the mental health problem in the country. The Ministry of Health recently shifted its paradigm from a hospital or institution-based mental health approach to one that is more community-based. However, a much-needed, comprehensive mental health service delivery system is
not yet in place. Successful implementation of the new policy direction will require substantial development of capacity, new and existing, in the health sector.

Environmental determinants of health are an important issue in Indonesia. Considerable air pollution resulting from extensive burning of fossil fuels, use of leaded gasoline in cities and major forest fires throughout Indonesia impact negatively on public health. Indoor air pollution resulting from excessive use of biomass fuel in poorly ventilated households, combined with unreliable or intermittent supply of safe water and inadequate sanitation, have led to dangerous levels of household pollution in some areas.

Indonesia is prone not only to natural disasters like sequeaks, volcanoes and earthquakes, but also to human-induced disasters, resulting in deaths and disabilities for many people. It is exceedingly difficult for the country’s health care system (as it would be for any health care system) to deal adequately with mass casualty incidents, or the many needs of internally displaced persons. The impact of the unprecedented tsunami — with hundreds of thousands of dead and missing people, nearly half a million displaced persons and the destruction of infrastructure and systems — tragically highlighted the importance of national and local emergency preparedness. There is an urgent need to improve community preparedness for disasters as well as the health sector response to emergencies, at district, provincial and central levels.

**Health systems**

The general decentralization process implemented in 2001 has had many impacts on the health system, even though it was not designed specifically with the health sector in mind. In particular, health financing, health information systems, human resources for health and service provision have been affected. Under decentralization, the responsibility for health care provision is largely in the hands of regional governments.

**Health financing**

Compared with neighboring Malaysia and Thailand, Indonesia spends relatively little on health services. The estimated total expenditure on health per capita in 2003 was US$ 33 in Indonesia compared with US$ 149 in Malaysia and US$ 90 in Thailand (all figures in US dollars at the then-prevailing exchange rates; Indonesia public health expenditure review, 2004). Within that, public sector spending on health per capita, in 2003 was estimated at US$ 11 in Indonesia, US$ 80 in Malaysia and US$ 63 in Thailand. Part of the discrepancy is explained by the fact that Malaysia and Thailand are richer countries, but another part is explained by the fact that they accord a higher priority to health. Public expenditure on health as a share of the national economy was 1.2% in Indonesia, compared with 2% in Malaysia and 3.1% in Thailand.

The overall health financing situation in Indonesia is complex and incompletely documented. Around 36% of total expenditure is undertaken by public sector agencies, while 64% is private. By far the largest single source of private expenditure is direct out-of-pocket payments by households, accounting for nearly half of the total expenditure. Services provided privately are largely financed by out-of-pocket payments, with some
insurance and employer-financed expenditure benefiting a minority of formal sector employees. Publicly provided services are financed by a mix of public budgets and user fees, in turn financed by a combination of households, employers and insurers. Until the advent of the new social insurance scheme for the poor, described below, insurance coverage of the population was low at (well under 10%).

Historically, a highly inequitable pattern of health financing has been observed. Distribution of household expenditures is even more skewed in favour of upper-income groups than the distribution of incomes itself. This reflects low utilization of health services by poor people and low use of public hospitals. The coverage of insurance, or direct employer-paid benefit, is confined to a minority of formal sector employees. Public budgets are distributed inequitably between geographical areas, while the benefit-incidence analysis showed implicit subsidies were captured largely by higher income groups. Since 2005, a new non-contributory scheme has been designed to provide state-subsidized health insurance for poor households, using the civil servants’ scheme as insurance carrier. This is an important and positive initiative, which may begin to address some of the above problems. Careful evaluation of the scheme will be required to determine the extent to which it improves access to quality services for the poor, and whether it is adequately funded.

A larger proportion of budgeted public expenditure now appears in district budgets, up from 10% (prior to decentralization) to 50%. In part, this merely reflects the transfer of responsibility for meeting salaries of civil servants from central to regional governments. A large proportion of programme operating expenses continue to be provided in a tightly earmarked fashion to regional governments from the decentralized component of the national-level budget. This national budget has risen strongly in recent years (from a very low base), largely reflecting additional spending from the decentralized component and the new commitment to provide insurance coverage for the poor. In 2006, as depicted in Figure 1, Indonesia’s health sector was not heavily dependent on external inflows, which accounted for less than 2% of the total expenditure. The inflows constituted a large share of public financing (6%), and a larger share still of public financing at central level (16%). However, 2002 probably marked a low point in external inflows, which had risen markedly during the economic crisis of 1997-2000 before declining. The inflows rose again in subsequent years, with the inception of new sources of funding, such as the Global Alliance for Vaccines and Immunization (GAVI) and Global Fund to fight HIV/AIDS, Tuberculosis and Malaria (GFATM).

**Health information systems**

Decentralization resulted in a partial breakdown of health information systems and led to an unclear division of reporting responsibilities. As a result, comprehensive data that cover the entire nation are not available. The disruption of the information flow makes it difficult to develop strategies and monitor health programmes in provinces and districts. However, exceptions do exist in some vertical programmes (tuberculosis, malaria or HIV/AIDS) where the Central Government retains the responsibility as the principal recipient of GFATM grants to the country.
Human resources for health

The human resource situation in health has major deficiencies in numbers and quality of the health workforce. Decentralization is one of many factors exacerbating long-standing problems with maldistribution and reportedly low productivity of health workers. Under decentralization it has become harder for civil servants to be redeployed and move across different levels of government. Other factors complicating management of the public sector workforce include poor incentives, widespread dual practice and expansion of the private sector in health services and educational facilities. The relatively low quality of the workforce is partly attributable to the lack of strong accreditation and licensing procedures. This in turn impacts on the quality, efficiency and equity of health care provision.

In 2001, the Ministry of Health reorganized its human resource functions. A new Institute for Empowerment and Development of Health Manpower was established to link and coordinate the previously separate centres in the development of an overall integrated strategic plan for health workforce development and a corresponding integrated information system. The World health report 2006 – working for health emphasized the critical role of government in developing sound policies and plans for human resources for health, and calls on governments to identify key issues and priorities for action. The Ministry of Health has expressed its commitment to this process and to improving the current situation.

Provision of health services

At the primary health care level, Indonesia is generally regarded as having relatively adequate levels of provision, with one public health centre for every 30 000 people on average. If sub-centres are included, there is one public facility per 10 000 people. However, these averages conceal large variations in geographic accessibility, with people in remote interior locations or small islands having particularly poor access. In addition to public facilities, private practices are operated by doctors, nurses and midwives, in many cases by the same personnel as are employed in public facilities. At the hospital level, Indonesia has low levels of bed provision at 0.6 beds per thousand population. Paradoxically, the utilization is also low, with bed occupancy rates in the vicinity of 50% in both public and private facilities. Low utilization is also observed in public health centres where it is common to have fewer patients per day than staff employed. It is widely assumed that the high level and unpredictability of user fees deter utilization. As in many countries, health services are disproportionately concentrated in urban areas and particularly in the larger cities, where the clientele with the greatest ability to pay resides.

The private sector is increasingly important in the provision of health care in Indonesia, especially in big cities, with wide variations in quality of care. Furthermore, since there is no regulation of pricing or quality of service in place, users are vulnerable to unnecessary treatment and expenses. The role of nongovernmental organizations (NGOs) in Indonesia has been growing during the last two decades but the exact number of NGOs providing health care services remains unknown.
While medicines to treat the vast majority of tuberculosis, malaria and HIV/AIDS cases exist, drugs are not reaching everyone due to limited affordability and availability, as well as other factors. Despite the presence of a strong Drug Regulatory Authority, responsible for the registration of medicines as well as quality control and inspection, counterfeit drugs remain a big problem. The fight against counterfeit drugs is resource-intensive and requires substantial cooperation of other sectors. At the same time, the use of traditional medicines (such as *jamu*) is popular and widespread in Indonesia. Yet procedures for quality control of traditional medicines are limited in scope and difficult to implement, also because large numbers of small-scale manufacturers exist.
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