



Sexual and reproductive health of unmarried young people in Asia and the Pacific

REVIEW OF KNOWLEDGE, BEHAVIOURS AND OUTCOMES

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PREPARED FOR
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LIST OF ACRONYMS

FSM	Federated States of Micronesia
HIV	Human Immunodeficiency Virus
Lao PDR	Lao People's Democratic Republic
PNG	Papua New Guinea
SRH	Sexual and reproductive health
STI	Sexually transmitted infection
UN	United Nations
UNFPA	United Nations Population Fund

EXECUTIVE SUMMARY

The majority of young people in Asia and the Pacific are unmarried. These young people are just entering their sexual and reproductive years, and have considerable need for supportive environments and comprehensive information and services to ensure this critical transition is a healthy one. However our understanding of unmarried young people's sexual and reproductive health (SRH) knowledge, behaviours and needs is relatively limited.

Encouragingly, there has been an increasing evidence-base addressing the SRH of young unmarried people in Asia and the Pacific over the last 10 years. Available literature indicates that while the prevalence of premarital sex varies within the region, it is not uncommon, particularly among males. Sex before marriage in itself is not necessarily a risk factor for poor SRH. However, studies published in this region suggest that premarital sex often occurs in the context of low knowledge, inconsistent use of condoms and contraception, and, in some cases sexual violence, putting young people at risk of adverse outcomes such as unintended pregnancy and sexually transmitted infections. Unmarried young people in particular face considerable barriers related to socio-cultural and gender norms that negatively impact on their access to essential information and services.

While the currently available information provides a useful basis for informing policy and programs, significant knowledge gaps remain. These include under-representation of young adolescents aged 10-14 years, disadvantaged or marginalised young people, and research from some countries and regions, most notably the Pacific. There are also gaps in our understanding of important SRH issues such as dating behaviours, sexual behaviour other than vaginal intercourse, same-sex sexual behaviour, contraceptive use, induced abortion and sexual violence.

RECOMMENDATION 1: *Increase the inclusion of young adolescents aged 10-14 years in national and sub-national studies, and ensure disaggregation of data by both marital status and age.*

RECOMMENDATION 2: *Improve the inclusion of disadvantaged or marginalised unmarried young people in SRH research, particularly those who are out-of-school, economically disadvantaged, migrants, living with disability, and young key populations.*

RECOMMENDATION 3: *Increase investment, and support local capacity development, in young people's SRH research in under-represented countries and regions, particularly the Pacific.*

RECOMMENDATION 4: *Address important knowledge gaps in current SRH research, including dating behaviours, sexual activity in addition to penetrative vaginal sex (including non-heterosexual activity), contraceptive use, abortion and sexual violence. Other key needs include greater research exploring information and service delivery preferences of unmarried young people and studies reporting key SRH outcomes (including biological measures).*

Young people in Asia and the Pacific live in diverse and rapidly changing contexts that have important implications for their SRH. Increasing age of marriage, access to education and media, urbanisation and globalisation are contributing to changing sexual values, norms and behaviours, such that young unmarried people will be an increasingly important target of SRH policy and programming. Addressing these research gaps is critical if countries are to meet these needs and ensure universal access to SRH for all young people.

INTRODUCTION

There are an estimated one billion young people aged between 10 and 24 years living in Asia and the Pacific, accounting for more than a quarter of the population in this region.¹ These young people are just entering their sexual and reproductive years, however understanding of the sexual and reproductive health (SRH) needs of the majority (831 million) who are unmarried remains limited.

Adolescence (Box 1) is a critical transition in the life course, during which foundations for health and wellbeing in adulthood, and that of the next generation, are established.² This period is defined by rapid biological, cognitive and psychosocial development, encompassing not only the physical changes of puberty that lead to sexual maturity but also the development of values, norms and identity related to sexuality and gender. Such changes bring new health needs and risks, and therefore a heightened need for information and services related to SRH.^{3,4}

While the biological processes of adolescence are universal, there is enormous diversity in the socio-cultural, economic and political contexts within which young people make this transition. Yet there are also some common challenges in this region, including conservative socio-cultural norms and attitudes towards premarital sex and gender, that significantly impact on unmarried young people's access to information and services they need to make a healthy transition to adulthood.⁵⁻⁷

All young people, irrespective of marital status, need access to quality, comprehensive information and services related to puberty and SRH to support this transition to adulthood. Such services are also critical to mitigating the potential risks associated with unsafe sexual behaviour, including sexually transmitted infections (STIs), early and unintended pregnancy, and sexual violence.

For many young people, adolescence heralds the onset of sexual activity. A recent review of young people's SRH in this region reported that a significant proportion of young people are sexually active.⁸ While for many the onset of sexual activity occurs in the context of marriage, an increasing number of young people are initiating sex before marriage. Nationally-representative data for unmarried young people are limited, however available Demographic and Health Surveys and Multiple Indicator Cluster Surveys report that up to three quarters of 15-24 year olds have had sex before marriage. Rates of premarital sex vary considerably in the region, ranging from less than 1% in some south and south-east Asian countries to over 50% in Oceania. Males are also much more likely to report premarital sexual activity than females.⁸

The recent review also concluded that most young people are insufficiently prepared for this transition, lacking the necessary knowledge and life-skills needed to navigate the challenges of puberty and to negotiate safe and consensual sex. They also face considerable barriers that limit their access to SRH services and commodities, including restrictive legislation and policy, negative socio-cultural attitudes and norms, and weakly implemented programs such as comprehensive sexuality education and youth-friendly health services.⁸

BOX 1. DEFINITIONS

“Adolescence” represents the transition from childhood to adulthood: puberty heralds its onset, with social role transition (completion of education/ employment/ independent living/ marriage / child rearing) signalling adulthood.

“Adolescence” has historically been defined as coinciding with the ages 10-19 years, with **“Youth”** referring to 15-24 years.

“Young people” (or adolescents and young adults) is a less formally defined term, corresponding to 10-24 years; this age bracket is increasingly used as it more reliably captures the social and developmental transitions of adolescence that extend to early adulthood, including risk factors for poor health. This period is often divided into early adolescence (10-14 years), late adolescence (15-19 years) and early adulthood (20-24 years).

As a result, young people in this region suffer preventable poor SRH: the prevalence of higher risk sexual behaviour, including non-use of condoms, multiple partners, and sex under the influence of alcohol or other drugs is high in some countries; up to half of 15-24 year old females in this region have experienced sexual violence; as many as 63% of pregnancies to girls aged 15-19 years are unintended, contributing to an underreported burden of unsafe abortion; and up to 10% of males and 20% of females report an STI or STI symptoms in the last 12 months.⁸

Enabling young people to have the highest attainable standard of SRH is a fundamental human right. As described in the *Convention on the Rights of the Child*⁹ and the *International Covenant on Economic, Social and Cultural Rights*,¹⁰ young people have the right to non-discrimination, privacy, autonomy, and the right to participate in decisions that affect them. In addition, the *International Conference on Population and Development*¹¹ Programme of Action has committed governments to protect and promote the rights of all young people to SRH education, information and care to ensure a healthy transition into adulthood. There are also several regional commitments that have articulated the rights of young people, including unmarried people, to SRH information and services and committed countries to ensuring equitable access for young people.ⁱ

Despite these imperatives, there is limited systematic information in this region describing unmarried young people's SRH needs, knowledge, behaviours and outcomes. Such information is critical to better understand the needs of this important population and inform effective policy and programming. In many countries, nationally-representative data exclude unmarried young people and/or do not address some aspects of SRH, such as unsafe abortion. However, there has been an increasing number of smaller, sub-national studies, presenting an opportunity to consolidate this information, identify key knowledge gaps, and inform a research agenda.

ⁱThese include: UN Economic and Social Commission for Asia and the Pacific; Association of South East Asian Nations; Pacific Policy Framework for Achieving Universal Access to Reproductive Health Services and Commodities, including Condoms

REVIEW PURPOSE AND METHODS

Aim

The aim of the review was to identify the existing peer-reviewed literature related to unmarried young people's (10-24 years) sexual behavior in Asia and the Pacific, describe the current status of unmarried young people's knowledge, practices, attitudes, and SRH outcomes, and highlight key knowledge and research gaps.

Objectives

The review focused on three main objectives:

1. Identify and describe the nature and scope of regional, national and sub-national studies published in peer-reviewed literature describing knowledge, attitudes, behaviours and outcomes related to SRH among unmarried young people in Asia and the Pacific
2. Synthesise available evidence on knowledge, attitudes, behaviours and outcomes related to SRH among unmarried young people for each country
3. Identify significant knowledge gaps and provide recommendations for how these might be addressed

Methods

A detailed description of the review methodology is included as Appendix 1.

Empirical studies published between January 2005 and November 2015 were sought from BIDS:IBSS, BIDS:Ingenta, PsycInfo via Ovid, PubMed (NLM), CINAHL via Ovid, Ovid journals, Ovid Medline, Books via Ovid, Web of Science, EMBASE via Ovid, Science Direct, Cochrane Reviews, Thomson Reuters and Anthropology plus. Searches were also conducted of two non-indexed journals: *Pacific Health Dialogue* and *Pacific Journal of Reproductive Health*.

Reference lists of key papers (including the recent report conducted for UNFPA Asia Pacific Regional Office) were also reviewed to identify additional studies meeting eligibility criteria.

Search terms were informed by the UNFPA *Framework for Action on Adolescents and Youth and Reproductive Rights and Sexual and Reproductive Health* (Box 2). Major areas of inquiry included: knowledge and attitudes related to SRH; sexual behaviour (dating, premarital sex, higher risk sex, use of condoms and contraceptives, sexual violence); and, SRH outcomes (pregnancy, abortion, STIs and sexually transmitted HIV).

Studies that focused on young people aged 10-24 years (or included data disaggregated by age and marital status), were conducted in Asia and/or the Pacific or one of 36 low or middle income countries were included. Studies focusing on commercial sex work and/or trafficking were excluded. Primary descriptive or exploratory studies were included; interventions studies, review articles, and non-original research were excluded.

BOX 2. SEARCH TERMS

Search terms

youth OR adolescen* OR young adult OR teen*

AND

unmarried OR non-married OR single OR premarital OR non-marital OR never married

AND

Asia OR Oceania OR Afghanistan OR Bangladesh OR Bhutan OR Cambodia OR China OR Democratic People's Republic of Korea OR India OR Indonesia OR Iran OR Lao PDR OR Laos OR Malaysia OR Maldives OR Mongolia OR Myanmar OR Burma OR Nepal OR Pakistan OR Papua New Guinea OR Philippines OR Sri Lanka OR Thailand OR Timor-Leste OR Viet Nam OR Cook Islands OR Fiji OR Federated States of Micronesia OR Kiribati OR Marshall Islands OR Nauru OR Niue OR Palau OR Samoa OR Solomon Islands OR Tokelau OR Tonga OR Vanuatu

AND

induced abortion OR contraception OR family planning OR HIV OR intimate partner violence OR unintended pregnancy OR premarital sex OR sexual behavior OR sexual health OR reproductive health OR sexually transmitted infection OR condom utilization OR sexual violence OR dating OR media OR communication media OR pornography OR gender OR sexual orientation

Titles and abstracts were screened for eligibility. Data from relevant full text articles or reports were extracted to identify major topic area, type of study, countries included, target population, setting and findings. Three reviewers mapped the studies by domain measured (knowledge and attitudes only, sexual behavior, SRH outcome) and by major topic / focus of the study. Quality appraisal was conducted of all included full texts using a quality appraisal tool adapted from the *Critical Appraisal Skills Programme (CASP) Qualitative Checklist*¹² and the *Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies*.¹³ The summary of findings were analysed thematically to determine overall key findings for the region and each country where one or more studies were available.

The full data extraction table is provided in Appendix 2.

Limitations

This review has a number of limitations. The first is that only peer-reviewed full text articles published in English were included, likely excluding some relevant studies published in national non-English journals. Secondly, studies focusing on commercial sex work and/or trafficking were excluded and we did not include a targeted search strategy for young key populations. This was beyond the scope of the current review, however it is well recognised that these young people have significant SRH needs and face distinct barriers to accessing information and services. Finally, the review included empirical studies only, therefore likely excluding relevant studies published in government, non-government organisation, UN agency and other non-peer reviewed research reports.

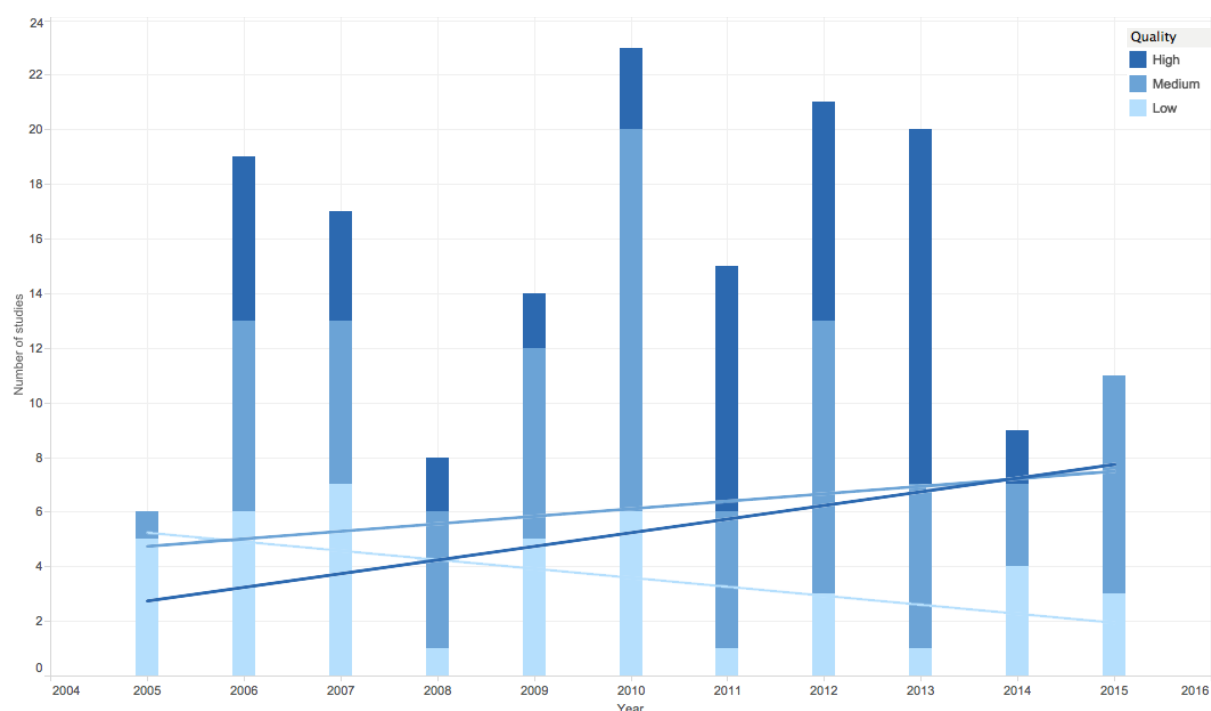
FINDINGS

Overview of findings

Mapping of identified studies

A total of 163 studies meeting eligibility criteria were identified. Forty-nine (30%) were high quality, 72 (44%) medium, and 42 (26%) assessed to be low quality. The proportion of studies that were of high or medium quality generally increased in the last 10 years (Figure 1).

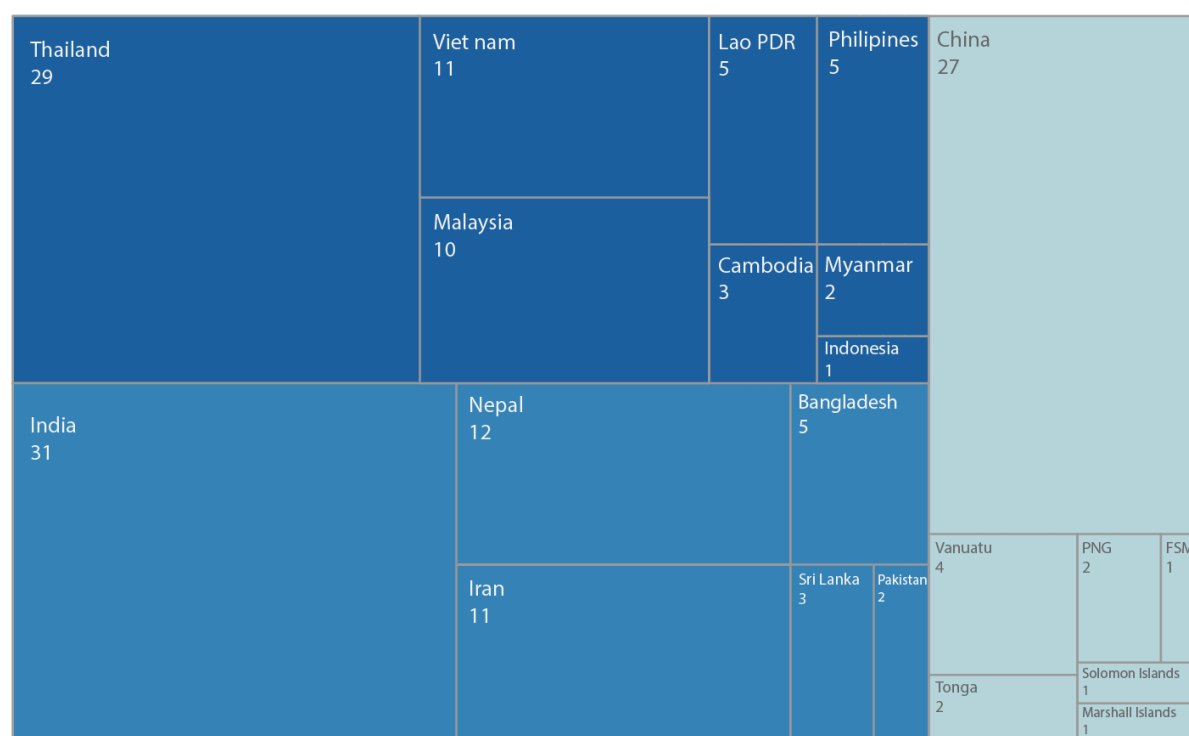
FIGURE 1. NUMBER OF STUDIES PER YEAR BY STUDY QUALITY



The solid bars represent the total number of identified studies per year and quality. The lines represent the trend in the number of studies of low, medium and high quality

At least one study was identified for 21 of the 36 included countries (Figure 2). Just three countries (India, China and Thailand) accounted for more than half (53%) of all studies. South East Asia and South Asia were the best represented sub-regions, with 66 and 64 studies respectively; the Pacific Islands had the fewest number of studies with eight (two of which included more than one country). There were no studies identified for Afghanistan, Bhutan, Democratic People's Republic of Korea, Maldives, Mongolia, Timor-Leste, Cook Islands, Fiji, Kiribati, Nauru, Niue, Palau, Samoa, Tokelau or Tuvalu.

FIGURE 2. NUMBER OF IDENTIFIED STUDIES BY COUNTRY

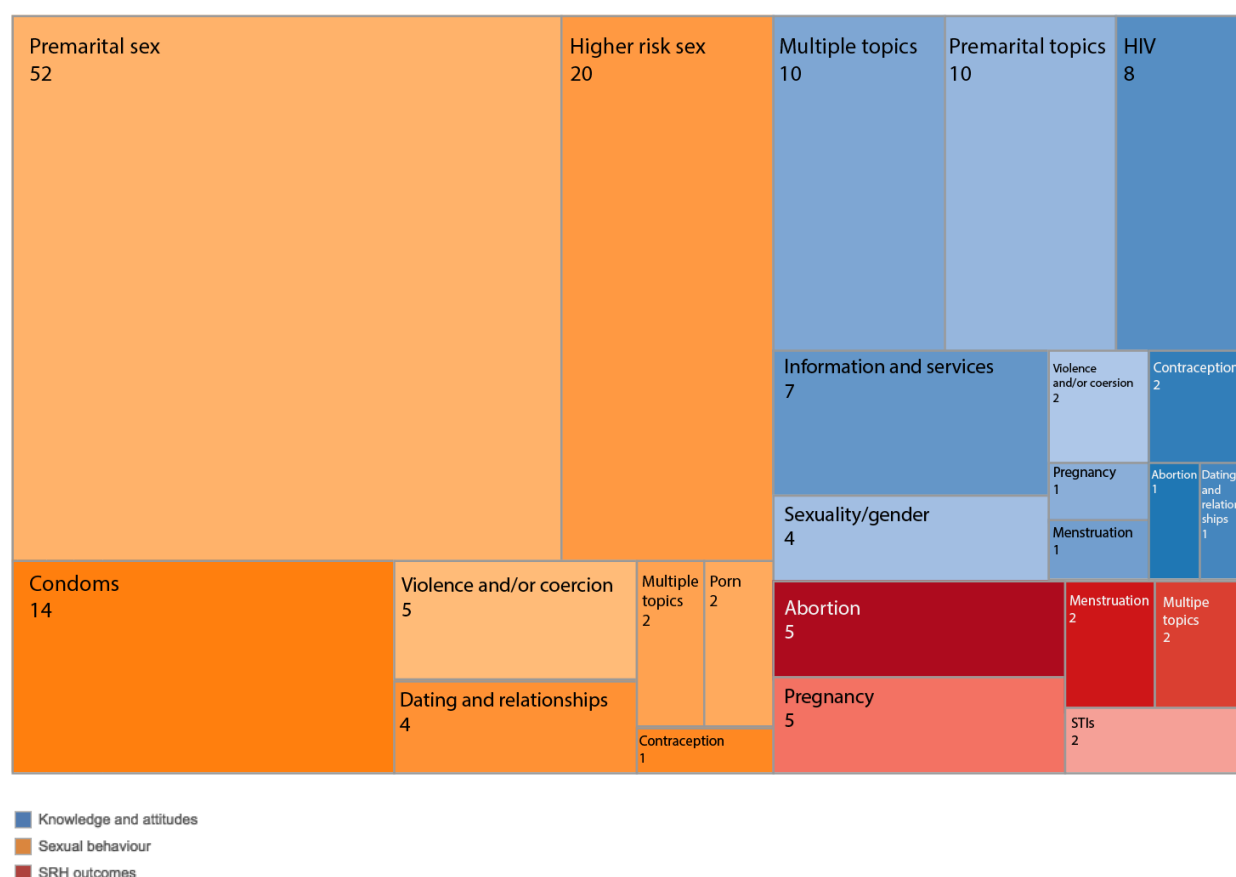


Note that the total number of studies by country (168) is greater than the total number of studies (163) as four studies included more than one country.

Forty studies (25%) included young people less than 15 years of age, although most of these were for ages 13-14 years and older. Only three studies included adolescents from the age of 10 years. Fifteen studies did not specify an age or only provided a mean (rather than range). Almost half (70) of studies were conducted exclusively in schools, colleges or universities, and only nine studies specifically sampled out-of-school young people. Fourteen studies targeted disadvantaged young people including migrant workers, young people who use illicit drugs, and young people living in urban slums. Three studies focused on young people who were same-sex attracted or transgender, four studies reported SRH needs for unmarried young people living with HIV, and only one study included young people living with a disability.

The majority of studies (100 (61%)) reported sexual behaviour. Forty-seven studies (29%) reported knowledge and attitudes only, and only 16 studies (10%) reported SRH outcomes. Of these, pregnancy and/or abortion was an outcome measure for ten studies, and only three studies included laboratory-confirmed STI. The most commonly researched topic was premarital sex (38% of studies) followed by higher risk sex (defined as age of onset of first sex <15, multiple partners, transactional sex, sex under the influence of alcohol or other drugs: 12% of studies), and condom use (9%). Five studies reported contraceptive use among unmarried young people, although this was the major topic of focus for only one study (Figure 3).

FIGURE 3. NUMBER OF STUDIES BY MAJOR TOPIC



Summary of key findings

SEXUALITY, DATING BEHAVIOUR AND PREMARITAL SEX

Unmarried young people commonly reported curiosity and interest in dating, sex and sexuality, despite often conservative sociocultural norms regarding premarital relationships.¹⁴⁻¹⁶ Traditional beliefs concerning gender roles were still prevalent in many settings, namely that girls should be chaste and naïve when it comes to sexuality, whereas boys must adhere to a narrow construct of masculinity that is defined by sexual behaviour and conquests.¹⁷ Such norms contributed to girls' limited decision-making power within relationships, including decisions about initiating sex.¹⁸ Many young people, particularly those with strong religious beliefs, also reported traditional attitudes that sex should be reserved for marriage and is for the purpose of reproduction,¹⁹ and that casual and premarital sex are immoral.^{20, 21} However, several studies throughout the region suggest that attitudes are becoming more permissive, particularly among urban young people.²²⁻²⁴

Males and females held particularly conservative views regarding premarital sexual behaviour of girls, with virginity until marriage still highly valued and expected in many countries in the region, while attitudes were generally more permissive for boys.^{23, 25, 26} In addition to concerns about shame and stigma, fear of unintended pregnancy and other consequences of premarital sex also contributed to less permissive attitudes among females.²⁷ Attitudes towards female premarital sex were more permissive within stable or "serious" relationships that were expected to lead to marriage.

Despite these conservative views, males and females reported a range of dating behaviours, with increasing participation in dating and romantic relationships with increasing age.^{28, 29} One study conducted in the Philippines suggested that boys progressed more quickly through dating behaviours to sexual intercourse than females.³⁰ The prevalence of premarital sex varied considerably between

countries, however there were some common trends. Males were much more likely to report premarital sex than females, and to report earlier onset of sexual activity.^{20, 31, 32} For example, a study of university students in Iran reported that 16% of males had ever had sex compared with just 0.6% of females.³³ Males often reported curiosity and peer pressure as the main factors that motivated them to initiate sexual activity.³⁴ Girls more commonly reported love and obligation as reasons for premarital sex, and while both reported a boy/girlfriend as the most common partner, boys also reported premarital sex with casual partners and transactional sex.³⁵ There were limited studies describing specific sexual behaviours, with penetrative vaginal sex most often measured and reported. Some studies also described oral and anal sex among unmarried people, although these practices were less prevalent than vaginal sex. Males also more commonly reported having experienced sex with a partner of the same sex than females. A study of university students in China reported that 3.4% of males and 1.7% of females had engaged in sexual activity with someone of the same sex.³⁶ In India, a study of rural 15-24 year olds reported that 11% of males and 3% of females had experienced same-sex activity.²⁰

A number of factors were associated with premarital sexual activity. Family was an important influence, with some studies reporting that having a poor relationship with parents, exposure to family conflict, and not living with parents were associated with premarital sex, particularly for females.^{32, 37} Lack of parental control as well as very strict parenting were also associated with sex before marriage.^{38, 39} The perceived attitudes and behaviours of peers were also significant, with young people who report that peers have permissive attitudes and/or are engaging in sexual activity more likely to report premarital sex themselves.⁴⁰⁻⁴² Several studies also reported an association between use of alcohol or other drugs and initiation of sex.^{32, 43-45} Some populations of young people were also more likely to report premarital sex and earlier onset of sex including migrant workers and young people who were not engaged in school.^{44, 46, 47} Differences between urban and rural young people were mixed, with some studies reporting premarital sex was more common among rural young people^{48, 49} and others indicating that sexual activity was more prevalent among those living in urban areas.⁵⁰

Males were much more likely to have viewed pornography than females, with the internet a common source of pornographic material.^{36, 51} Having viewed pornography was associated with more permissive attitudes towards premarital sex among males,⁵² and several studies reported an association between pornography and premarital sex, although no studies were able to demonstrate a causal relationship.^{15, 20, 37, 53-55}

SEXUAL VIOLENCE AND COERCION

Various forms of sexual violence and coercion were reported, including harassment, unwanted sexual attention, dating violence (including domination, intimidation and physical violence), and pressured or forced sex.⁵⁶⁻⁵⁸ One study from Thailand reported supportive or accepting attitudes towards dating violence, particularly among females.⁵⁹ Violence and coercion were much more commonly reported by females than males, including forced or coerced first sex.⁵⁸ The most common perpetrators of harassment were peers, with romantic partners the most common perpetrators of dating and sexual violence.^{56, 57} High rates of violence were also experienced by young transgender people.⁶⁰ Young men and women described jealousy, poor communication and mistrust as factors that contributed to dating violence.⁶¹ A history of family violence, being out-of-school, and young age at onset of sexual activity were also associated with every having experienced violence.^{58, 62} Experiencing sexual violence was associated with an increased risk of STIs, unintended pregnancy and abortion.⁶³⁻⁶⁶

HIGHER RISK SEXUAL BEHAVIOUR

Higher risk sex includes behaviours that increase the risk of HIV and STI transmission. These include early onset of sexual activity (less than 15 years), multiple sexual partners, intergenerational sex, transactional sex, and sex under the influence of alcohol or other drugs.⁶⁷ The prevalence of higher risk behaviours varied, but were generally more common among unmarried males than females.⁶⁸⁻⁷⁰

Sexual risk behaviours were often related, for example early onset of sexual activity was associated with a higher risk of multiple partners, and also associated with low use of condoms and contraception.⁷¹⁻⁷⁴ Similarly, many other risky adolescent behaviours such as use of alcohol, tobacco and other drugs and peer delinquency were also associated with risky sexual behaviour.^{51, 75, 76} Other factors associated with higher risk behaviour included low self-esteem, lack of family support (particularly for females), and a history of family violence or conflict.^{68, 75, 77} Studies including migrants and young people who were same-sex attracted also reported high prevalence of risk behaviours, increased prevalence of exploitation and violence, and poor access to support networks and services contributing to higher risk sex.⁷⁸⁻⁸⁰ One qualitative study conducted with students with a hearing impairment reported that sexual abuse contributed to risky sexual behaviour among young people with a disability.⁸¹ An increased risk of sexual violence, STIs and pregnancy were reported among those engaging in higher risk behaviour.^{82, 83}

CONDOM USE

Use of condoms by unmarried young people was generally low, including during first sex, last sex and consistent use.⁸⁴⁻⁸⁸ Young people who had ever experienced sexual violence, those who were same-sex attracted or transgender, and young people living with HIV also reported low use of condoms.^{89, 90} Males were more likely to report use of condoms with casual partners than with romantic partners,^{91, 92} and for both males and females notions of trust, faithfulness, intimacy and love were reasons for not using a condom with a boy/girlfriend. Condom use was lower among females than males in most studies reporting this as an outcome.⁹²⁻⁹⁴ Gender norms that prohibit girls initiating discussions about condoms or sex and girls' lack of decision-making power within relationships were contributing factors. Other factors contributing to non-use of condoms included low risk perception, negative attitudes (including that they reduce intimacy or pleasure), and sociocultural norms concerning premarital sex that lead to poor access to condoms due embarrassment and fear of being 'caught' or seen obtaining or carrying condoms.^{92, 95} Conversely, higher prevalence of condom use was reported among young people with more positive attitudes (particularly that condoms are important to protect health and future life goals) and those with higher self-efficacy.⁹⁶

HIV AND SEXUALLY TRANSMITTED INFECTIONS

While most studies reported that unmarried young people had heard of STIs and HIV, comprehensive knowledge about transmission and prevention was low and misconceptions were common.⁹⁷⁻¹⁰⁰ Awareness that condoms can prevent HIV was also low. Females, particularly in rural areas, were reported to have much lower levels of knowledge than their male peers in some settings, and comprehensive knowledge was higher among older adolescents and university students.^{101, 102} Self-reported STI was associated with higher risk behaviours (as described above) and non-use of condoms. Two studies conducted in Thailand included laboratory diagnosis of STIs and reported an association between Chlamydia infection and non-use of condoms, higher number of lifetime partners, young age at onset of sex, and a history of illicit drug use.^{103, 104}

CONTRACEPTION, PREGNANCY AND ABORTION

Comprehensive knowledge of modern contraception, including emergency contraception was generally low among unmarried males and females, with unmarried people less likely to have received information compared with their married peers.¹⁰⁵⁻¹⁰⁷ Additionally, misconceptions about reproduction and pregnancy were also common and contributed to low risk perception. Use of modern methods of contraception, other than condoms, was also low among unmarried females, with reliance on less effective traditional methods.^{24, 108, 109} Fear of side effects, sociocultural and religious beliefs, and girls' lack of decision-making power contributed to low use.¹⁰⁹

Unmarried females were more likely to report unintended pregnancy compared with married women.¹¹⁰ Unintended pregnancy was associated with higher risk sexual behaviour and forced sex, lower levels of SRH knowledge, family conflict or instability, and lack of parental supervision.¹¹¹⁻¹¹³ Few studies reported abortion among this population. Of those that did, history of abortion was

associated with experiencing sexual violence and unmarried women reported stigma, lack of decision-making power, and lack of partner or family support as reasons for seeking abortion.^{64-66, 114} Rates of abortion were 35 times higher among unmarried compared with married adolescents in a study of rural women in Bangladesh,¹¹⁵ and unmarried women in India were more likely to delay seeking abortion.⁶⁴⁻⁶⁶

ACCESS TO INFORMATION AND SERVICES

Friends, mass media and the internet were commonly reported sources of SRH information, most often for information about relationships, sex and sexuality.¹¹⁶⁻¹¹⁸ Information on less sensitive or taboo topics, such as puberty, STIs and HIV, was more commonly provided through schools and health workers.¹¹⁹ Parent-adolescent communication about SRH was generally limited, despite both young people and parents expressing a preference to discuss some of these issues within families. Embarrassment on the part of parents and adolescents, parents' own lack of knowledge, and sociocultural taboos contributed to limited communication.¹²⁰ Males were generally more able to discuss matters related to SRH openly, compared with girls who did not feel free to talk about sex because of social and gender norms.¹²¹ Much of the information provided to young people through 'formal' channels such as schools focused primarily on biology and disease, with little information provided about broader aspects of SRH such as relationships and sexuality.¹¹⁶

Young unmarried people also reported poor access to SRH services. Lack of information / awareness about available services and low health literacy, sociocultural norms and attitudes contributing to shame and stigma, and health worker attitudes and skills were commonly reported barriers impacting on access.¹²²⁻¹²⁴

Country summaries

Bangladesh

Population estimates from 2012 indicate that young people aged 10-24 years account for 31% (47 million) of the Bangladeshi population. Currently, there is no national-level data on premarital sexual activity of these young adults.¹ In 2010, however, data published from a national survey on adolescent reproductive health, revealed that one-tenth of unmarried Bangladeshi males reported ever having had sex. These sexual encounters often involved high-risk behaviours such as sexual intercourse with commercial sex workers.¹²⁵ No data were available on the sexual behaviour of unmarried females. Three of the identified studies were conducted in rural settings and explored issues such as gender-based violence, abortion, and HIV in young female cohorts only. The incidence of abortion was found to be 35 times higher in unmarried adolescents compared to their married counterparts,¹¹⁵ and over a third of young girls aged 13-19 had experienced some form of gendered harassment and unwanted sexual attention.⁵⁶ Knowledge with regards to sexually transmitted diseases was low, with only 20% of girls being aware of STDs, and 60% never having heard of HIV/AIDS.¹⁰¹ Only one study focused on both male and female adolescents, and qualitatively explored the issue of sexuality. Findings revealed that both genders were curious about a range of sexual and reproductive issues, but also required more information and support prior to their first sexual encounter.¹⁶ All studies were of medium quality, with the exception of the HIV study, which was rated as high.

Focus Area	Population	Setting	Quality	Study Design	Key Findings
Abortion ¹¹⁵	Female <20	Rural	Medium	Cross-sectional	<ul style="list-style-type: none"> Incidence of abortion 35 times higher for unmarried than married adolescents Abortion rates were higher for adolescents who were <18 years old and for those with more than a primary education
Violence and/or coercion ⁵⁶	Female 13-19	Rural	Medium	Cross-sectional	<ul style="list-style-type: none"> 35% of girls experienced gendered harassments, 34% experienced unwanted sexual attention, 14% experienced sexual intimidation, and 43% experienced harassment of any type Having a higher level of education and economic status, increased the risk of being harassed
Premarital sex ¹²⁵	Male 15-19	Urban and rural	Medium	Cross-sectional	<ul style="list-style-type: none"> 13% reported ever having had sex Having future study plans was associated with a lower risk of engaging in premarital sex Knowledge of reproductive health and life skills did not have a strong influence Respect for parents' values and beliefs about sex was associated with decreased odds of premarital sex Peer influence was associated with increased odds of premarital sex

Sexuality / gender ¹⁶	Female and male 12-18	Urban	Medium	Qualitative	<ul style="list-style-type: none"> • Girls expressed curiosity in relation to virginity, menstruation, sexual power, STIs, and homosexuality • Boys had a strong curiosity about the female body and sexual intercourse, and were also interested in masturbation, wet dreams, penis shape and size, and the duration of intercourse • The study highlighted that adolescents have a need for information and support long before they ever have sex
HIV ¹⁰¹	Female 10-19	Rural	High	Cross-sectional	<ul style="list-style-type: none"> • Age, education, residence, and mass media, were significant predictors of reproductive health knowledge • 20% of girls had heard about STDs, and 69% had incorrect knowledge about the routes of transmission • 60% of girls had never heard about HIV/AIDS, and 48% had not heard about the routes of transmission • 48% believed that prevention of HIV/AIDS is not possible

Cambodia

With an estimated population of 4.5 million, Cambodia's adolescents make up 31% of the total population.¹ National data on premarital sexual behaviour reveal that 8% of young males, and less than 1% of females aged 15-24 years, report sex before marriage.¹²⁶ These statistics are supported by one rural study that investigated higher risk sex among males and females aged 10-24, reporting that 90% of adolescents believed that sex should be deferred until marriage.⁵¹ In another study of urban college students, sexual intercourse within the last 3 months was reported by 13% of the study population – a slightly higher proportion than the national average.⁶⁸ The study also revealed that over 50% of respondents did not use condoms during their last sexual encounter.⁶⁸ Condom use was slightly higher in an urban study of males aged 15-24 living in urban slums. Over 70% of respondents reported condom use at last sex.⁹¹ Within the same study, contraceptive knowledge, educational attainment, and partner type, were all associated with condom use.⁹¹ Of the three studies identified, one was considered to be of medium quality, and two were high.

Focus Area	Population	Setting	Quality	Study Design	Key Findings
Condoms ⁹¹	Male 15-24	Urban, slum	High	Cross-sectional	<ul style="list-style-type: none"> 1/3 reported ever having intercourse and 1/2 had had sex by the age of 23 50% of all sexually active respondents reported three or more partners, and 71% used a condom at last sex Condom use varied by type of partner, was less likely among males outside the education system, and higher among those more informed about condoms
Higher risk sex ⁵¹	Female and male 10-24	Rural, community	Medium	Cross-sectional	<ul style="list-style-type: none"> 90% believed sex should be deferred until marriage 92% reported that they would seek SRH services in the future Boys were more likely to report alcohol use, going out late at night with friends, gambling, pornography use, gambling, and practicing risky behaviours with peers than girls
Higher risk sex ⁶⁸	Female and male 14-20	Urban, college	High	Cross-sectional	<ul style="list-style-type: none"> 13% reported sexual intercourse during the past 3 months 35% reported have two or more sex partners over the 3 month period Over 50% did not use condoms during their last sexual intercourse

China

With approximately 326 million young people aged 10-24 years, China's adolescents and young adults represent 24% of the total population.¹ Although no national-level data on premarital sexual activity of these young adults exist, 27 studies were identified for this review, 10 of which were of high quality, 13 of medium, and 4 of low quality. Most sampled students from secondary schools, colleges or universities. Findings revealed that male students were more likely to engage in premarital sex than females,¹²⁷ and that they held more permissive views towards sex.²⁶ Only-children and adolescents of migrant workers were more likely to have experienced sexual intercourse before marriage,^{46, 128} and sexual debut was found to be earlier in males, those living in rural areas, and those living in western China.¹²⁹ Risk of adolescent pregnancy was significantly associated with having parents who had separated or divorced¹¹³, and in all three studies investigating contraception, substantially low levels of condom use was reported in the past 12 months.^{84, 86, 87} One study on pornography revealed that 93% of males, aged 18-25 had viewed it online, and that it was highly correlated with premarital sexual permissiveness.⁵² Despite identifying mass media, teachers, and friends, as important sources of information, knowledge with regards to sexual and reproductive health was found to be low in all 3 studies that investigated this issue.^{119, 130, 131}

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ⁸⁷	Female 16-27	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • 18% of students reported ever having sexual intercourse • 20% used a condom in their first sexual encounter, and these students were more likely to be aged 20 or older at first intercourse • 30% of those having intercourse reported never or sometimes using condoms in the past 12 months • Students using condoms consistently in the past 12 months were more likely to be majoring in science and technology, to believe that condoms are the safest way to prevent STD and unwanted pregnancy, and to have used a condom at first intercourse
Condoms ⁸⁴	Female and male 17-28	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • 14% of respondents were sexually active • 24% considered themselves to be at moderate to very high risk of contracting HIV • 40% never used condoms • Risk behaviours tended to increase with age

Condoms ⁸⁶	Female and male 16-20+ (mean 21)	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • 40% of both male & female students reported frequent (always/often) condom use during the previous year • Condom use during the first sexual experience, oral contraceptive use, and higher condom self-efficacy score were predictors of frequent condom use • Frequent condom use was less likely practiced by those with higher risk-awareness for pregnancy/HIV/STDs, and by women with lower scores for perceived condom benefits
Higher risk sex ⁷⁹	Female and male 18-24, migrants	Urban	Qualitative	<ul style="list-style-type: none"> • Acculturative stress, discrimination, social isolation, conflicts and increased sexual opportunities were associated with increased sexual risk behaviour • Premarital sex, cohabitation, unprotected sex and visiting sex workers were common among this population • Reasons for not using condoms included being unprepared, lack of knowledge, and barriers in accessing reproductive services
Higher risk sex ⁷⁷	Female 16-27	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • 18% reported ever having sexual intercourse • 5% reported having multiple sex partners • Family, peer and work influences, knowledge, and attitude toward sex were risk factors for ever having sex • Risk factors for multiple sex partners included working in a place of entertainment, having close friends that were living with boyfriends, and poor academic performance • These women were also more likely to practice masturbation, start having sex at a younger age, have sex with married men at first coitus, and not use condoms consistently
Higher risk sex ⁶⁹	Female and male 18-27	Urban, community	Cross-sectional	<ul style="list-style-type: none"> • 64% of participants held liberal attitudes toward premarital sex • Around 60% held conservative attitudes toward causal sex relationships and multiple sex partners • Males tended to hold more liberal attitudes toward high-risk sex behaviours than females • 42% reported having engaged in premarital sex, whereas less than 10% engaged in high-risk sexual behaviours • Males also reported higher amounts of premarital sex, casual sex relationships, and multiple sex partners

				<ul style="list-style-type: none"> Females reported higher levels of sexual coercion
Higher risk sex ⁸²	Female mean age of 20	Urban, university	Cross-sectional	<ul style="list-style-type: none"> 18 % reported ever having sexual intercourse Mean age of sexual debut was 19.3 (± 1.7) years Females initiating sex earlier were more likely to have first sex with men who were not their boyfriends, and less likely to take contraception, to use a condom at first encounter They were more likely to have multiple lifetime and concurrent sexual partners, to report pregnancy, and be diagnosed with sexually transmitted diseases
Higher risk sex ⁸³	Female and male 14-24	Urban, school and college	Cross-sectional	<ul style="list-style-type: none"> 3% of females and 7% of males reported ever having had sex 41% of females and 30% of males reported forced sex 52% of females reported condom use compared with 49% of males 27% of females and 23% of males had experienced a pregnancy School type and SES were found to be independently associated with sexual intercourse and forced sex for high school students For college students, educational level, school type, family structure, maternal education and SES were independently associated with high-risk sexual behaviours
Information and services ¹¹⁹	Female and male 15-19	Urban, community	Cross-sectional	<ul style="list-style-type: none"> School teachers and mass media were identified as the two most important sources of sex knowledge Adolescents obtained knowledge on topics with less taboo (e.g. puberty) from teachers and parents and obtained knowledge on topics with more taboo (e.g. sexuality) from mass media Doctors were the primary source for STI/HIV/AIDS knowledge Sexually active adolescents obtained sex knowledge mainly from peers or mass media

Multiple topics ³⁶	Female and male 18-25	Urban and rural, university	Cross-sectional	<ul style="list-style-type: none"> • 12.6% (15.4% of male versus 8.6% of female) students reported having premarital heterosexual intercourse • 10.8% (10.5% of males versus 11.2% females) had oral sex • 2.7% (3.4% of males versus 1.7% females) reported same-sex activities • 46% (70.3% of males versus 10.8% of females) reported masturbation behaviours • 57.4% (86.2% of males versus 15.6% females) students viewed pornography • 2.7% (4% of males versus 0.9% of females) reported forcing their sexual partners to have sex, and 1.9% (2.4% of males versus 1.2% of females) reported being forced to have sex
Multiple topics ¹³¹	Female and male 10-19, living with HIV	Rural, health facility	Cross-sectional	<ul style="list-style-type: none"> • 79% had never discussed puberty development or sexuality with parents • Over 50% had never heard of condoms • 20% reported not having any informational source of SRH and HIV knowledge • Only 5% correctly answered all questions regarding HIV knowledge and pregnancy, with 18% correctly answered questions regarding contraception
Multiple topics ⁶³	Female 14-24	Urban, health facility (abortion)	Cross-sectional	<ul style="list-style-type: none"> • 14% of participants had experienced sexual violence • 43% were diagnosed with STD • Among victims of sexual abuse, 9% had their first sexual encounter when they were younger than 18 years • 43% had had 2 or more sexual partners • 22% never used contraception
Multiple topics ¹³⁰	Female 16-27	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • 18% of students reported ever having sexual intercourse, of which 18% had become pregnant, and 22.7% had contracted RTIs • Younger age or not using a condom at first sex and having multiple sex partners contributed to premarital pregnancy • Majoring in arts, being from less-developed regions of China, having multiple partners, and self-reported pregnancy contributed to RTIs
Multiple topics ¹³²	Female 16-27	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • SRH knowledge was lacking in the cohort, with only 8.8% of respondents scoring >60 points (out of 100), and more than 70% getting less than half of the questions correct

				<ul style="list-style-type: none"> The most common source of SRH knowledge came from newspapers and magazines (66%), followed by classmates or friends (41.5%) Age, grade, major, menarche age, family residence, being the only child, and mother's occupation were significantly related to knowledge
Pornography ⁵²	Male 18-25	Urban	Cross-sectional	<ul style="list-style-type: none"> 93% of participants had viewed online pornography Cyberpornography was strongly associated with peer influence and susceptibility to peer pressure Participants who had more online pornography viewing were found to score higher on measures of pre-marital sexual permissiveness
Pregnancy ¹³³	Female and male 15-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> Weighted proportion analyses estimated that 14% of females and 18% of males had been involved in an unintended pregnancy 99% and 91% of such pregnancies were reported to have ended in abortion by females and males, respectively
Pregnancy ¹¹³	Female 15-24	Urban	Cross-sectional	<ul style="list-style-type: none"> A history of parents having separated or divorced increased the risk of adolescent pregnancy by 59%
Premarital sex ¹³⁴	Female and male 15-24	Urban, community	Cross-sectional	<ul style="list-style-type: none"> Sexual behaviour was associated with seven non-sexual risk behaviours, especially with smoking, drinking, drug use, and running away from home Smoking and drinking were usually initiated before sexual intercourse Youth having the highest risk of sexual behaviour were more likely to have the highest risk of nearly all non-sexual risk behaviours
Premarital sex ²⁶	Female and male 15-24	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> Male respondents held more permissive attitudes toward premarital sex Both genders expressed greater permissiveness to male premarital sexual behaviours Female respondents who held more traditional gender-role attitudes were more likely to exercise a double standard with respect to male as opposed to female premarital sex

Premarital sex ¹³⁵	Female and male 15-19	Urban	Cross-sectional	<ul style="list-style-type: none"> Sex communication with parents was relatively infrequent Male adolescents were more likely to talk with fathers and female adolescents with mothers Younger male adolescents (15-17) who had communicated sex issues with parents were more likely to report having had sexual experience
Premarital sex ¹²⁸	Female mean age of 20	Urban, university	Cross-sectional	<ul style="list-style-type: none"> Only-child students scored higher on sex-related knowledge, were more inclined to agree with premarital sex, multiple sex partners, one-night stands, extramarital lovers and homosexuality, and were more likely to have experienced sexual intercourse Only-children were less likely to experience coercion at first sex and have first sexual intercourse with men not their "boyfriends" than children with siblings
Premarital sex ¹³⁶	Female and male "grade 6-12" (not specified)	Urban, school	Cross-sectional	<ul style="list-style-type: none"> 8% of students reported being sexually active had marked differences in selected health outcomes compared to their non-sexually counterparts >90% of the sexually active students had tried alcohol, with more than 50% being regular drinkers, and nearly 50% reported depression in the past 12 months Substance use, poorer perception of health, and academic performance were also significantly higher in the sexually experienced students
Premarital sex ⁷⁷	Female 16-27	Urban, university	Cross-sectional	<ul style="list-style-type: none"> 18% reported ever having sexual intercourse 32% had their first sexual intercourse at the age of 18 or younger, with more than 50% at an age less than 20 years Those more likely to engage in premarital sex were older, majored in art, were from one-child, richer and/or divorced families, had a mother with university or above education, and had current close friends living with boyfriends
Premarital sex ¹²⁹	Female and male 15-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> The mean age at sexual debut was 22.8 years (22.5 years for men and 23.1 years for women) Sexual debut before age 18 was rare for both genders Ages 21-24 appeared to be the normal range for sexual debut Debut was earlier for males, those living in a rural areas, and for those living in western China

Premarital sex ¹²⁷	Female and male 19-23	Urban, university	Cross-sectional	<ul style="list-style-type: none"> • Male students were almost two times more likely than female students to have had premarital sex • Students who were impulsive decision makers, where more exposed to sexual media programs, and perceived that their parents/friends would approve of their having sex, were more likely to have premarital sexual intercourse
Premarital sex ⁴⁶	Female and male 11-16, migrants	Urban	Cross-sectional	<ul style="list-style-type: none"> • Adolescents of migrant workers were more likely to have ever had sexual intercourse than their general resident counterparts (7% vs. 5%) • 47.3% adolescents of migrant workers and 34.3% of those adolescents of general residents reported no condom use in sexual intercourse during last three months
Premarital sex ²⁴	Female and male, 15-24, out-of-school	Urban	Cross-sectional	<ul style="list-style-type: none"> • 60% had permissive views concerning premarital sex, more so among males than females • 18% had ever had sex • 20% who were sexually active always used contraception and 25% had experienced pregnancy

Federated States of Micronesia

Approximately 38,000 young people aged 10-24 years live in the Federated States of Micronesia, making up around 37% of the population.¹ There are no national data available on the prevalence of premarital sex among young people, and the published literature is equally limited with only one low quality study identified. The article looks at sexual behaviour among youth, and found a high proportion of respondents were sexually active. Young men were more likely to engage in higher risk behaviours and condom use was low among both males and females.⁷⁰

Focus Area	Population	Setting	Study Design	Key Findings
Higher risk sex ⁷⁰	Females and males aged 15-19, including out-of-school	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> 76.1% of youth surveyed were sexually active Young men were more likely to engage in higher risk behaviour than young women. They were more likely to be sexually active, have had multiple sexual partners and have had sex under the influence of alcohol or other drugs Of those who were sexually active, more young men than women (54.2% compared with 50%) never used protection against STIs

India

At just under 349 million, India has one of the highest proportions of young people aged 10-24 years within the Asia-Pacific region.¹ According to national level data, of the 37% of youth that make up the population, 12% of males and 1% of females have reportedly engaged in sex before marriage.¹³⁷ Of the 31 studies identified, 10 were of high quality, 13 were of medium, and eight were of low quality. Gender differences in premarital sexual activity were also found in 12 of the identified studies, with proportions of sex before marriage ranging from 10-30% for males, and <1-5% for females across the various study populations.^{20, 31, 35, 37, 138-140} One study attributed these differences to the gender bias that was reflected in the attitudes of both the male and female participants - that is, permissive attitudes towards premarital sex for males, but not for females.¹⁴¹ Although knowledge with regards to contraception was reportedly high (96%)¹⁴², two, high quality studies highlighted the discomfort and embarrassment both sexes felt in obtaining them from a pharmacist or health service provider.^{92, 142} Consequently, condom use was very low in both study populations. Adolescent pregnancy and second-trimester abortion was strongly associated with lack of sexual and reproductive knowledge and parental supervision/support,^{66, 105, 112} and a significantly high proportion of adolescent females reported being touched against their will or persuaded/forced to engage in sex.^{57, 58}

Focus Area	Population	Setting	Study Design	Key Findings
Abortion ⁶⁴	Female 15-24	Urban and rural	Qualitative	<ul style="list-style-type: none"> Recognition of an unintended pregnancy was delayed for many adolescents For those who suspected they were pregnant, acknowledgment was delayed even further Once recognised, most confided in their partner, and for the most part, partners were supportive A significant minority, including those who had experienced forced sex, did not have partner support and delayed the abortion until the second trimester of pregnancy Family support was absent in most cases Where provided, it was largely to protect family reputation
Abortion ⁶⁶	Female 15-24	Urban and rural	Mixed methods	<ul style="list-style-type: none"> Unmarried women were far more likely to report non-consensual sexual relations 25% of unmarried women, compared to only 9% of married women, had had a second trimester abortion Unmarried women were far more likely to report non-consensual sexual relations leading to pregnancy They were also more likely to report such obstacles to timely abortion as failure to recognise the pregnancy promptly,

				<p>exclusion from abortion-related decision-making, unsuccessful previous attempts to terminate the pregnancy, and lack of partner support</p>
Abortion ⁶⁵	Female 15-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> • 83% of women realized they were pregnant within the first two months of their pregnancy, and 91% within the first trimester • 84% decided before the end of the first trimester to have an abortion, but only 75% obtained one in this period • One in six participants said that pregnancy had resulted from a non-consensual sexual encounter, and such reports were more frequent among those who obtained a second-trimester abortion • Women who were older or who had more schooling had a decreased likelihood of having a second-trimester abortion • Those who lived in rural areas, those who did not receive full support from their partners and who reported a forced encounter, had an increased likelihood of having a late abortion
Condoms ⁹²	Female and male 15-24	Urban & rural	Mixed	<ul style="list-style-type: none"> • Only 7% of young women and 27% of young men who had had premarital sex had ever used condoms • Among both sexes, discomfort with approaching a provider or pharmacist for condoms was inversely correlated with most measures of condom use • Having peers who had had premarital sex was generally positively correlated with condom use • Females who had had premarital sex only with non-romantic partners were less likely than those with only romantic partners to have used a condom at last sex • Males were generally more likely to use condoms with a non-romantic than romantic partner

Dating and relationships ¹⁴	Female and male 15-19	Urban	Cross-sectional	<ul style="list-style-type: none"> 62% of males and 53% of females reported that someone of the opposite sex had expressed an interest in them; 86% of males and 63% of females reported feeling good about it 67% of males and 47% of females reported that they liked someone from the opposite sex Males were more likely to seek information about the person they were interested in (76% vs. 61%), and to engage in heterosexual premarital sex (32% vs. 6%) Females were less likely than males to report that it is okay to engage in premarital sex if the male and female love one another (14% vs. 33%)
Dating and relationships ¹⁴³	Female and male 15-24	Urban and rural	Mixed methods	<ul style="list-style-type: none"> Those who were unmarried were about as likely as those married to report a pre-marital partnership Among those who were unmarried, a large % had expected to marry their romantic partner, but for 1/3 of young women and 1/2 of young men, the relationship had been discontinued
High risk sex ⁷⁵	Male 18-22	Urban	Cross-sectional	<ul style="list-style-type: none"> Sexual debut and subsequent number of lifetime partners was significantly impacted by growing up in a two-parent household, having adequate levels of parental supervision, experiencing violence in the home, and having peers who drank Condom use at first intercourse was significantly influenced by age of sexual debut and type of sexual partner
Higher risk sex ⁷¹	Female and male 14-20	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> 5% acknowledged ever having engaged in sex Prior risk involvement was significantly correlated with future risk intention and those involved in one risk behaviour were more likely to engage in other risk behaviours
HIV ⁹⁷	Female 15-19	Urban	Cross-sectional	<ul style="list-style-type: none"> More than 1/3 students had no accurate understanding about the signs and symptoms of STIs other than HIV/AIDS Approx. 30% of respondents believed HIV/AIDS could be cured 49% felt that condoms should not be available to youth 41% were confused about whether the contraceptive pill could protect against HIV

				infection and 32% thought it should only be taken by married women.
Information and services ¹²⁰	Female and male 14-18	Rural	Qualitative	<ul style="list-style-type: none"> Rural adolescents and their parents are interested in talking about sexual topics with one another and do so, albeit in a nuanced way Even though adolescent boys and girls consistently identified sources other than their parents for information about sex and HIV/AIDS, they nonetheless conveyed a strong desire to receive such information from their parents Although few parents had initiated discussions about sex with their children, most expressed a desire for such discussions, particularly in light of the health consequences of unwanted pregnancies, STIs, and HIV/AIDS
Multiple topics ¹⁴²	Male 17-22	Rural	Mixed	<ul style="list-style-type: none"> Electronic mass media (67%) was reported as the prime source of SRH information for respondents, yet they lacked detailed knowledge of various contraceptives 68% of the young men were aware of condoms as a HIV/AIDS preventive role, but only about two-fifths mentioned condom use to prevent unwanted pregnancies Although most young men (96%) knew where to access a condom, they felt uncomfortable or embarrassed doing so in their own villages or close by because of socio-cultural norms that prevented them from using contraceptives Very few respondents (4%) disclosed using condoms themselves, but 59% said they knew someone from their peer group who had used them
Multiple topics ¹⁴⁴	Female 16-25	Not specified	Cross-sectional	<ul style="list-style-type: none"> 48% stated that the suitable age for marriage is >18 years old for women More than half the respondents stated that the interval between child birth should be 3-5 years 96% were of the opinion that both parents are responsible for determining the number of children Knowledge of STDs and HIV was found in 92% and 74% of respondents, respectively

Menstruation ¹⁴⁵	Female 14-21	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> • Prevalence of reproductive health morbidities among both married and unmarried girls was quite high • Age, media exposure, and economic status emerged as significant correlates of treatment-seeking practices among both married and unmarried girls
Menstruation ¹⁴⁶	Female 15-20+	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> • Approximately 65% of girls reported having dysmenorrhoea • 19% had given the history of excessive vaginal discharge with or without low backache/lower abdominal pain • A strong association was found between RTIs and poor menstrual hygiene
Multiple topics ¹⁴⁷	Female and male 15-24	Urban	Cross-sectional	<ul style="list-style-type: none"> • Higher percentage of boys knew about condoms, whereas a higher % of girls knew about copper-T • Girls had a better knowledge on legal age of marriage, that both the partners are equally responsible for the problem of infertility, and that the gender of the baby is determined by male sperm
Pregnancy ¹¹²	Female <25	Urban	Case-control	<ul style="list-style-type: none"> • A strong association was found between adolescent pregnancy and lack of parental supervision and control, poor intra-family relationship, lack of knowledge on SRH, and non-engagement of adolescent in any productive activity
Pregnancy ¹⁰⁵	Female 15-24	Rural	Cross-sectional	<ul style="list-style-type: none"> • Married women were more likely to have received information on SRH, contraception and abortion than unmarried women • For both married and unmarried women, family and friends were the primary source for all three types of information • 71% of young unmarried women could not correctly respond to any of the five questions about safe abortion • Only 3% of unmarried women reported their ability to influence timing of pregnancy or marriage
Premarital sex ³⁷	Female and male 15-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> • 24% of young men had had a romantic relationship, 26% had engaged in some form of physical intimacy, and 18% had had sex • The proportions among young women were 8%, 6% and 2%, respectively Exposure to alcohol, drugs or pornographic films and having more frequent interaction with peers, were positively associated with

				<p>romantic and sexual relationships for both young women and young men</p> <ul style="list-style-type: none"> Educational attainment was negatively associated with both types of relationships for young women, but only with sexual relationships for young men
Premarital sex ²⁰	Female and male 15-24	Rural	Mixed	<ul style="list-style-type: none"> 30% of boys and 4% of girls reported have had any sexual experience Of the 11% of boys and 1% of girls who reported penetrative sex (vaginal/oral/anal), around half of them did not use condom Homosexual experience was reported by 11% of boys and 3% of girls AIDS awareness was high among both boys and girls (89% & 87 %, respectively), however the knowledge of STDs was limited Exposure to alcohol, drugs, and pornographic films were positively related with penetrative and non-penetrative sex relationships for both genders
Premarital sex ³¹	Female and male 18-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> 22% of males and 5% of females reported ever having had sex Only 22% males and 6% females reported consistent condom use for premarital sex in the last 6 months Current use of alcohol and tobacco was strongly associated with premarital sex for males, while not living currently living with parents and being an income earner was the strongest association with premarital sex for females.
Premarital sex ³⁵	Male 18-24	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> 14% had one or more pre-marital sexual exposures Various sex partners included girlfriends (95%), commercial sex workers (15%), homosexuals (6%), and multiple sex partners (34%) 63% were using condom consistently 60% were in the age group of 16-20 at the time of sexual debut
Premarital sex ²⁷	Female and male 15-25	Urban	Qualitative	<ul style="list-style-type: none"> For girls, fear of parents, society and the unknown (i.e. getting pregnant) were seen as external controls in individual urge of sexual activity The younger age group believed that fear of pregnancy, societal pressures and

				<p>parental expectations and trust in them were the key factors which stopped them from indulging in premarital sex</p> <ul style="list-style-type: none"> On occasion, however, curiosity and sexual urge overcame caution
Premarital sex ¹⁴⁸	Female 12-20	Urban	Cross-sectional	<ul style="list-style-type: none"> Mean age of sexual debut was 17 years Sexual resilience was correlated with attitude towards premarital sex, self esteem and partner pressure It was not found to be with age, family income, education, or knowledge
Premarital sex ¹³⁸	Male 15-18	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> 20% of peri-urban and 7% of rural boys had experienced unprotected sexual intercourse Among the rural boys who had experienced premarital sex, all had experienced vaginal intercourse with girls of their peer group Among the peri-urban boys who had experienced sexual intercourse, 10% majority of them experienced vaginal (10) and a few anal (1) with the same sex
Premarital sex ¹³⁹	Female and male 15-24	Urban and rural	Mixed	<ul style="list-style-type: none"> Estimates suggest that premarital sexual initiation occurred in adolescence for 1 in 20 young women and 1 in 10 young men For the majority, first sex was with an opposite-sex romantic partner, unprotected, and forced for sizeable proportion of young women Considerable gender differences were apparent in the correlates of age at first premarital sex, with peer- and parent-level factors found more often to be significant for young women than men
Premarital sex ¹⁴⁰	Female and male 13-16+	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> Almost one-tenth of respondents had premarital sexual intercourse
Premarital sex ⁵⁵	Female and male 12-19	Urban and rural	Case-control	<ul style="list-style-type: none"> Accessing pornography and having unfriendly relationship with parents had higher likelihood of sex initiation Adolescents who reported sexual abuse, STDs symptoms, smoked and those who had not read scientific literature on SRH were more likely to have initiated sex early.

Premarital sex ¹⁴¹	Female and male 15-24	Rural	Cross-sectional	<ul style="list-style-type: none"> The majority of students expressed conservative attitudes towards premarital sexuality Many students not only disagreed with casual sex but also considered it immoral Gender bias (i.e., permitting premarital sex for males and not for females) was reflected in their attitudes to some extent On average, male and more senior students had scores reflective of more liberal attitudes towards sexuality A positive association was found between age, peer interaction, erotic exposure, tobacco, smoking, alcohol consumption and knowledge about SRH issues
Premarital sex ⁴⁸	Male 14-19	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> Rural and urban boys differed significantly in their sexual attitudes and practices Place of residence and exposure to media were found to be significant predictors of sexual activity Urban boys were significantly less likely to be involved in penetrative sexual activity compared to their rural counterparts
Violence and/or coercion ⁵⁷	Female and male 15-19	Urban	Cross-sectional	<ul style="list-style-type: none"> 32% of boys and 42% of girls reported being touched against their will Both boys and girls who had ever worked and those who had a friend of the opposite gender were more likely to report the experience The most commonly reported perpetrators were female friends for boys (60%) and strangers for girls (93%) 15% of boys and 3% of girls reported that someone forcibly tried to have a physical relationship with them The most commonly reported perpetrators were female friends for boys (72%) and neighbours (60%) for girls
Violence and/or coercion ⁵⁸	Female 15-24	Urban and rural	Mixed methods	<ul style="list-style-type: none"> 33% reported being persuaded (14%) or forced (19%) to engage in sex Young women residing in urban areas and in communities reportedly characterised by physical fights among youth were more likely to have experienced sex by persuasion Young women who had delayed sexual initiation and those who displayed self-efficacy were less likely than others to

				<p>experience forced sex</p> <ul style="list-style-type: none"> • Young women who had experienced geographic mobility in adolescence and who had witnessed parental violence were more likely than others to report forced sex
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Indonesia

There are an estimated 63 million young people aged 10-24 years living in Indonesia, representing 26% of the total population.¹ No national level data on the prevalence of premarital sex among young people are available, and only one high quality study was identified from the published literature. This article looks at pornography use among young Indonesian university students. Findings suggest that pornography consumption is common and more popular among young men. Pornography consumption was also found to be predictive of sexual behaviours outside of marriage in young male students.⁵³

Focus Area	Population	Setting	Study Design	Key Findings
Pornography ⁵³	Females and males aged 18-23	Urban, university	Cross-sectional	<ul style="list-style-type: none"> The study found that pornography is as widely and readily consumed as in comparable international studies predominantly utilising Western background samples from more sexually liberal and less religious countries with very few laws on pornography. Gender differences in patterns of pornography consumption were pronounced and comparable with findings in international counterpart studies. For men only, pornography consumption was found to significantly predict common sexual behaviours in non-marital relations.

Iran

There are an estimated 22 million young people aged 10-24 years, accounting for 29% of Iran's population.¹ There are no national survey data reporting the prevalence of sex before marriage, however 11 studies were identified for this review of which eight reported sexual behaviour. Three studies were of high quality, five medium and three low quality. The available literature suggests that premarital sex and higher risk behaviours are more common among males, with very low rates of premarital sex among females reported in some studies likely reflected strong socio-cultural taboos and gender norms. Premarital sex was associated with several factors including older age, substance use, permissive attitudes of young people and peers, and family relationships.^{38, 72, 149-152} Comprehensive knowledge of SRH was also low, particularly with respect to contraception and condoms.^{33, 98, 153}

Focus Area	Population	Setting	Study Design	Key Findings
Higher risk sex ¹⁵⁴	Students aged 18-25	University	Cross-sectional	<ul style="list-style-type: none"> For sexually experienced students, the mean age at first sex was 17.6 years 24% started sexual activity at <15 years, 34.3% had at least 3 partners, 40.6% stated using condom at last sex
Higher risk sex ⁷²	Boys aged 15-18	Urban	Cross-sectional	<ul style="list-style-type: none"> Having no access to Internet, feeling regretful at sexual debut, having only one sexual partner and lower knowledge of condoms are predictors of condom non-use Older age, using alcoholic drinks, early sexual debut, and poor knowledge of reproductive physiology are predictors of multiple sexual partners among adolescent boys aged 15–18 years
HIV ⁹⁸	Students aged 14-18	Urban secondary schools	Cross-sectional	<ul style="list-style-type: none"> Students reported that television (84%) and school teachers (66%) were the best sources of HIV/AIDS information, while parents (27%) and school books (15%) were least informative. Most students knew that heterosexual intercourse (90%) and shared intravenous needles (94%) can cause HIV infection; however, salient misconceptions were revealed. Only 53% were aware that condoms protect against infection through sexual intercourse. Knowledge of contraceptive methods was also low.
Multiple topics ¹⁵³	School students	Urban high school	Cross-sectional	<ul style="list-style-type: none"> 11.8% of the students had a low sexual knowledge, 46.7% had average and 41.5% had a high level

				<p>of knowledge. There was no significant difference between male and female students' general sexual knowledge.</p> <ul style="list-style-type: none"> The highest knowledge was around awareness of the religious rules concerning sex.
Premarital sex ³³	Males and females, mean age 22.7 and 21.4	University	Cross-sectional	<ul style="list-style-type: none"> 54 students (8%) reported having sexual intercourse before marriage; 16% of males and 0.6% of females; 48% of them had used condoms. There was a mean knowledge score of 55% about methods of contraception, 57% about STIs and 54% about methods of HIV prevention. There were no significant differences between single and married students in knowledge about contraceptives, STIs and HIV prevention methods.
Premarital sex ¹⁵¹	Males aged 15-18	Urban community	Cross-sectional	<ul style="list-style-type: none"> 28% of the sample reported having engaged in sexual activity. Sexual experience was associated with older age, access to satellite television, alcohol consumption and permissive attitudes toward sex. Substantial proportions of respondents held misconceptions regarding condoms, STIs and reproductive physiology. Attitudes toward premarital sex were more permissive among respondents who were older, were not in school, had work experience, had access to the Internet or satellite television, lived separately from their parents, or reported having used alcohol, cigarettes or drugs.
Premarital sex ¹⁵⁵	Adolescents aged 15-18	Urban	Cross-sectional	<ul style="list-style-type: none"> Reproductive health knowledge among male adolescents was poor compared to that of their female peers. Although premarital friendships were moderately acceptable to both males and females, the majority were against premarital sex, particularly among female participants. There were evidences of gender-based double standards in perceptions of premarital sexuality among both males and females; particularly, it was stronger among males than females.

				<ul style="list-style-type: none"> Male adolescents reported earlier and greater experiences of premarital heterosexual intimacy and sexual contact than females. Multiple partners were also more common among males than females. Females had a tendency to regret first sexual contact more than males, which reflects that first sex is more likely to be unplanned and unwanted among females compared to males.
Premarital sex ¹⁵⁰	Young people aged 18-25	Urban community	Qualitative	<ul style="list-style-type: none"> Most of the young people interviewed were unmarried and were either engaged in sexual relations or had been at one time or another with a boyfriend/girlfriend or acquaintance. Many of the health risks that the young adults are exposing themselves to are unknown by them, as most reveal that they are uninformed about the consequences of unprotected sex, poly-drug use, multiple partners, abortion, self-administered contraceptive pills and other potential risk behaviours. Many women noted that as unmarried young adults they did not have access to oral contraceptives and, if they did, many indicated that they were fearful of purchasing these lest their parents or family members discover them.
Premarital sex ¹⁵²	Male students aged 15-17	Urban high school	Cross-sectional	<ul style="list-style-type: none"> 57% of this sample planned to remain abstinent until marriage. Another 23% rejected the notion of remaining abstinent and 20% were uncertain. Students whose mothers were employed and who received a higher daily allowance were more likely to report that they would not remain abstinent. No significant independent relationship between HIV/AIDS-related knowledge and an intention to remain abstinent was detected. However, perceived subjective norms, self-efficacy and perceived susceptibility to contracting the HIV virus all are associated with the intention to remain sexually inactive among adolescents.
Premarital sex ³⁸	Unmarried college students	Urban university	Cross-sectional	<ul style="list-style-type: none"> Very strict and very relaxed parental control during adolescence were both associated with having had a

				<p>boyfriend, but only the former was associated with having had premarital sex.</p> <ul style="list-style-type: none"> • Respondents were more likely to have had premarital intercourse if they did not live with both parents or if their family had more liberal values; they had reduced odds of having had sex if they had a closer relationship with their parents
Premarital sex ¹⁴⁹	Female students aged 20-23	Urban university	Cross-sectional	<ul style="list-style-type: none"> • Low self-efficacy, perceived peers' liberal attitude on virginity , perception of parents' liberal attitude towards relationship with the opposite sex and poor family atmosphere were predictors of ever having any type of sexual experience after controlling for other factors. • The only predictors of penetrative sex were older age, low self-efficacy, poor family atmosphere, liberal parental attitude and liberal peer norms on virginity.

Lao PDR

Lao PDR's 2.3 million young people aged 10-24 years account for 35% of the total population.¹ National survey data indicate that 4% of females and 25% of males aged 15-24 years report premarital sex. Five studies addressing unmarried young people's SRH were identified: three were high quality studies and two medium quality. Two studies explored traditional practices in a rural area of northern Lao PDR that contribute to a high prevalence of early sexual debut and higher risk behaviours among both adolescent girls and boys.^{156, 157} Other studies conducted in urban settings reported that males were more likely to engage in premarital sex than females, with peer and family factors important influences, and consistent use of condoms was low. While HIV knowledge was generally high, knowledge of other SRH issues such as emergency contraception was lacking.^{85, 158}

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ⁸⁵	Students aged 16-19	Urban	Cross-sectional	<ul style="list-style-type: none"> The majority of students surveyed were aware that HIV can be transmitted by sexual intercourse (97.7%), from mother to child (88.3%) and through sharing needles or syringes (92.0%). Misconceptions about transmission of HIV were observed among 59.3% to 74.3% of respondents. Nearly half of the surveyed students (45.3%) said that they would be willing to continue studying in a school with HIV-positive friends, and 124 (41.3%) said they would continue attending a school with HIV-positive teachers. 31.3% of students had a history of sexual intercourse, and 70.2% of these students had used a condom. However, only 43.9% said they used condoms consistently.
Contraception ¹⁰⁶	Males and females aged 15-30	Entertainment venues	Cross-sectional	<ul style="list-style-type: none"> 21% of unmarried young people had heard of emergency contraceptive pills. Females and younger adolescents (15-19 years) were less likely to have heard of emergency contraception.
Higher risk sex ¹⁵⁷	Young people aged 14-19	Community-based	Cross-sectional	<ul style="list-style-type: none"> 48% of adolescents had ever had sex. Mean age of first sex was 14.6 for males and 13.7 for females. Of these, 7% of males and 4% of females had ever had anal sex. 71% of males had experienced the cultural practice of "open foreskin" and 98% of girls "vagina breakthrough" - where pre-pubescent young people between the ages of 11-15 must have sex with an older person (thought to bring on maturation). Of those who had had sex in the last 12 months, 54% of males and 31% of

				<p>females had had 2 or more partners. 43% of males and 37% of females had not used a condom in the last 6 months. Despite the high prevalence of risk behaviours, risk perception related to STIs and HIV was low.</p>
Premarital sex ¹⁵⁶	Young people aged 14-19	Rural, community-based	Qualitative	<ul style="list-style-type: none"> This study explores Akha understandings of customary first pre-pubertal sex acts, a thonh thong ('break through vagina' [BV]) for girls and yaha heu ('open foreskin' [OF]) for boys, (sex with an older, experienced person) which are thought to enable the maturing of bodies into adulthood. The study also examines the practice of a thor ta yang ('Welcome Guest') in which sexually initiated girls have sex with male visitors to Akha villages. The study found that many young women experience BV as painful and traumatic. However, since all Akha in the study 'knew' that young bodies will not mature into attractive, healthy adults if they do not perform BV and OF, attitudes were largely positive.
Premarital sex ¹⁵⁸	Youth aged 18-24	Urban	Cross-sectional	<ul style="list-style-type: none"> Most respondents held positive attitudes towards premarital sex, with males having more liberal attitudes than females. Prevalence of premarital sexual activity was higher among males than females (44.7% and 19.2%, respectively). Predictors of premarital sex for males were age, sexual attitudes, perceived parental expectations regarding sex, dating and peer influence. For females, predictors were father's level of education, parent-youth sexual communication, peer influence and liberal sexual attitudes.

Malaysia

There are around 8.4 million young people aged 10-24 years in Malaysia, representing 30% of the population.¹ No national data on the prevalence of premarital sex among young people are currently available. A total of 10 studies were identified looking at the SRH of unmarried young: five were of high quality, one was of medium and four were of low quality. Five studies focused on premarital sex, predominantly among student populations.^{21, 22, 54, 159, 160} They reported conservative attitudes towards sex before marriage for females, reflecting gender norms, and lack of comprehensive knowledge about SRH. The prevalence of premarital sex was less than 15%, and generally higher among males than females. Two studies described contraceptive knowledge and use among unmarried females and found low use of effective contraception with generally low knowledge and misconceptions common.^{73,}

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Focus Area	Population	Setting	Study Design	Key Findings
Contraception ¹⁰⁹	Female school and university students aged 14-26	Urban	Qualitative	<ul style="list-style-type: none"> The study found a lack of knowledge about sexual issues and contraception among the participants. Many engaged in unprotected sexual intercourse and relied on periodic abstinence, natural methods, and traditional folk pregnancy preventive practices. The findings also revealed numerous categories of factors influencing sexual attitudes and behaviours: ethnic group and religion, level of religiosity, peer pressure and norms, and parental monitoring. With regard to condom use, factors such as embarrassment about condom acquisition, low perceived susceptibility to sexually transmitted infections (STIs), and perceived efficacy of traditional and folk methods of contraception, were uncovered from the discussions.
Higher risk sex ⁷³	Female adolescents aged 13-17	Rural schools	Cross-sectional	<ul style="list-style-type: none"> Of the 770 rural female students, 3.2% of respondents reported experience of sexual intercourse in the past three months. Out of those sexually active girls, 36% were 17 years old and 20% stated having sexual intercourse with more than one partner, and 72% did not use contraception during the most recent sexual intercourse. Midnight activities, peer-sexual disorder, self-evaluation, and attitude toward sexual health were significant predictors of sexual intercourse in rural girls in Malaysia
HIV ¹⁶¹	College students aged 18-22	Urban	Qualitative	<ul style="list-style-type: none"> There were definite differences in gender roles in terms of how adolescents perceived sex, selection of sex partners and communication with their partners. Definitions of stable and casual relationships differed between males and females.

				<ul style="list-style-type: none"> • Most participants were concerned about pregnancy rather than sexually transmitted diseases or HIV infection when they interpreted safe sex. • Reasons for not practising safe sex include trust between sex partners, complacency, low perception of risk, and negative attitudes towards condom use.
Multiple topics ¹¹⁸	Secondary school students – mean age of 15	Secondary school	Cross-sectional	<ul style="list-style-type: none"> • Questionnaire items with the fewest correct responses included: whether one can get pregnant after a single act of sexual intercourse (30.4%), whether sexual intercourse causes sexually transmitted diseases (STDs) (12.4%) and whether washing the vagina after sexual intercourse prevents pregnancy (17.0%). • Adolescents' main source of sexual information was friends (64.4%). • Mean knowledge score was significantly higher among females than males on items assessing whether the genitalia may be touched freely by family members, females having attained menarche may become pregnant if having sex, whether pregnancy will occur if there is penetration of the penis into the vagina, whether premarital sexual intercourse causes pregnancy and if there is a relationship between abandoned babies and premarital pregnancies. The mean knowledge score assessing whether pregnancy can be prevented using condoms was higher among males than females.
Pregnancy ¹¹¹	Unmarried Muslim adolescent females	Urban	Cross-sectional	<ul style="list-style-type: none"> • Among the contributing factors that cause young Muslim females to engage in unsafe premarital sex resulting in pregnancy are the parents, peer-influence, mass media and personal issues. Notably however, the study found that the primary factor was the lack of religiosity and religious practice among female Muslim adolescents, despite the efforts of Islam in Malaysia to promote abstinence rather than safe sex.
Premarital sex ²¹	Female university students aged 17-26 years	Urban	Cross-sectional	<ul style="list-style-type: none"> • Respondents had low scores for knowledge of reproduction and pregnancy, contraceptive use and contraceptive availability. The majority of women surveyed did not have liberal values in relation to premarital sexual behaviour. • Ethnic group was the strongest correlate of knowledge and attitude scores; being of Malay Muslim ethnicity was associated significantly with lower knowledge scores and premarital sex permissiveness. Other

				significant correlates were year of study, maternal occupational groups, level of religious faith, dating status and urban-rural localities. Level of premarital sex permissiveness was inversely correlated with reproduction and pregnancy knowledge score, and contraceptive knowledge scores.
Premarital sex ²²	Students aged 13-17	Secondary schools	Cross-sectional	<ul style="list-style-type: none"> • Risk factors for having permissive attitudes toward practice of premarital sexual activities were male students, being less religious, and younger age group of students (13 to 14 years old). • Having good knowledge on sexual and reproductive health was a protective factor against permissive sexual attitude.
Premarital sex ¹⁵⁹	Students aged 15-20	Government schools	Cross-sectional	<ul style="list-style-type: none"> • 10.6% of students claimed that they never heard about STIs. • Approximately 12.6% claimed to have sexual experience of which 75.7% had their sexual debut at 15-19 years and 38.2% had more than 3 partners. • Sexual experience was found to be significantly associated with gender, ethnicity and education level. However, multiple partner behaviour was significantly associated only with gender. Mean knowledge score was 11.60 out of 33 and knowledge level was significantly associated with religion, education level, course stream, socioeconomic class and sexual experience.
Premarital sex ¹⁶⁰	Students aged 12-19	Secondary school	Cross-sectional	<ul style="list-style-type: none"> • 5.4% reported having had sexual intercourse. The proportion among male students who had had sex was higher (8.3%) compared with female students (2.9%). The mean age at first sexual intercourse was 15 years. • 1% of students reported that they had been pregnant or had made someone else pregnant. • Adolescent sexual intercourse was significantly associated with (1) socio-demographical factors (age, gender); (2) environmental factors (staying with parents); and (3) substance use (alcohol use, cigarette smoking, drug use), even after adjustment for demographical factors.

Premarital sex ⁵⁴	Unmarried youth undergoing national skill training program	Youth Training Institutions	Cross-sectional	<ul style="list-style-type: none"> • The prevalence of premarital sex was 4.6% (6.2% for women and 2.6% for men) • Six variables were significant predictors of premarital sex: religion, race, lover, reading or watching porn, masturbation and bullying.
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Marshall Islands

Marshall Islands' 20,000 young people account for 37% of the country's population.¹ National survey data report that 62% of females and 77% of males aged 15-24 years have had sex before marriage, with higher risk behaviours such as sex before the age of 15 (4%), multiple partners (13%) and sex under the influence of alcohol (19%) more common among young males than females.¹⁶² One low quality study was identified for the Marshall Islands, that similarly reported that a significant proportion of secondary students in urban areas had ever had sex, and up to one in eight had ever experienced pregnancy.¹⁶³

Focus Area	Population	Setting	Study Design	Key Findings
Premarital sex ¹⁶³	Male and female secondary students 13-20 years	Urban schools	Cross-sectional	<ul style="list-style-type: none"> 67% of males and 44% of females had ever had sex 12% of males and 8% of females had ever experienced pregnancy (self or partner) Over 80% reported intention to use condoms; less than three-quarters knew a source of information about sexuality

Myanmar

An estimated 14 million young people aged 10-24 years live in Myanmar, making up 28% of the total population.¹ No national data are available on the prevalence of premarital sex. There has also been limited literature published on the SRH of unmarried adolescents, with one medium quality study and one low quality study identified. The available evidence suggests that young people in Myanmar have inadequate knowledge of SRH issues, some do engage in premarital sex, and both sex before marriage and higher risk sexual behaviours are more common among adolescent boys and young men.

Focus Area	Population	Setting	Study Design	Key Findings
Multiple topics ¹⁶⁴	Females and males aged 15-24, out-of-school, economically disadvantaged	Urban, community	Qualitative	<ul style="list-style-type: none"> The majority of young people of both sexes were deficient in knowledge of the locations and functions of reproductive organs. Most said that their main health concern was AIDS. Participants reported that pre-marital sex was common, usually beginning between aged 16-10 Malaria and AIDS were mentioned as information needed by young people. TV and magazines/journals were prioritized as preferred channels of disseminating health messages.
Premarital sex ⁴²	Females and males aged 15-24	Urban and rural, community and school	Cross-sectional	<ul style="list-style-type: none"> 10.1% of medical students engaged in premarital sex, whereas among community youths, the corresponding rate was 11.9%. Premarital sexual experience did not differ significantly between the two groups. Risk behaviours were correlated with one another. Having close friends who engaged in similar behaviours was found to be the major contributing factor for those kinds of risk among both groups. There was a significant difference in the prevalence of all risk behaviours between male and female respondents. Such risk behaviours were more dominant among males, while being very low among females.

Nepal

There are more than 8.5 million young people aged 10-24 years in Nepal, representing 32% of the total population.¹ According to national estimates, 1% of young women aged 15-24 years and 22% of young men have engaged in premarital sex.¹⁶⁵ Twelve studies focusing on the SRH of unmarried Nepali adolescents were identified: two were of high quality, seven of medium quality and three of low quality. The available evidence suggests that the prevalence of premarital sex varies significantly between populations, that males are more likely than females to engage in sex before marriage, and that the likelihood of premarital sex increases with age. Unmarried young people have relatively poor knowledge of SRH issues, although encouraging levels of HIV and emergency contraception awareness were reported in two studies.^{107, 166} Unmarried women seeking abortion services experienced stigma and anticipated negative responses.¹⁶⁷ Young migrants were identified as a particularly vulnerable group with moderate levels of premarital sex and low levels of perceived risk.⁷⁸

Focus Area	Population	Setting	Study Design	Key Findings
Abortion ¹⁶⁷	Females aged 16-24	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> Never-married women were more likely than ever-married women to report receiving contraception or abortion information in the past year from television, radio, or a friend or neighbour Never-married women expected more negative responses from having an abortion than ever-married women
Condoms ¹⁶⁸	Females and males aged 15-20+	Urban, college	Cross-sectional	<ul style="list-style-type: none"> Unmarried students were significantly more likely to have used a condom at first sexual intercourse compared with married students
Contraception ¹⁰⁷	Females and males aged 15-20+	Urban, college	Cross-sectional	<ul style="list-style-type: none"> 69.3% of unmarried youth had ever heard about emergency contraception The awareness level was significantly higher among younger, unmarried youth who were from outside Kathmandu Valley, who lived with friends, and who had received reproductive health education in school/college
Higher risk sex ⁷⁸	Female and male migrants aged 14-19	Urban, venue	Mixed methods	<ul style="list-style-type: none"> One in five boys and one in eight unmarried girls reported experience of sexual intercourse Early sexual experimentation, multiple partners, and low and irregular use of condoms are not uncommon. Instances of sexual exploitation by factory owners or managers were documented but were rare. Most non-regular sex partners were described as friends from the same factory or community Despite high-risk behaviour, relatively few young people considered themselves to be at risk of getting STIs or HIV/AIDS

Pakistan

Pakistan has over 57 million young people aged 10-24 years, accounting for 33% of the country's total population.¹ No national data are available on the prevalence of premarital sex among adolescents. There were only two low quality studies identified that focus on the SRH of unmarried young people in Pakistan. The first found that levels of SRH knowledge were higher among males, however many young men and women had inadequate knowledge.¹⁶⁹ A qualitative study detailing narratives from young transgender women found consistent experiences of sexual violence and stigma. This vulnerable group of adolescents also reported few opportunities for condom use when engaging in sex work.⁶⁰

Focus Area	Population	Setting	Study Design	Key Findings
Multiple topics ¹⁶⁹	Females and males, mean age 17	Rural, community	Cross-sectional	<ul style="list-style-type: none"> Males were relatively more knowledgeable than females about puberty (M = 68%; F = 58%), pregnancy (M = 55%; F = 43%), family planning (M = 62%; F = 50%) and sexually transmitted infections (M = 56%; F = 44%)
Violence and/or coercion ⁶⁰	Transgender women aged 14-20	Urban, community	Qualitative	<ul style="list-style-type: none"> These young people face high levels of stigma, violence and sexual abuse. The average age of first sex was 11 years old and all reported having been raped during childhood and early adolescence, often several times While some mothers and siblings were quietly supportive, young feminised men often end up running away from home, finding support as a member of a hijra dera, a 'pseudo-household' led by an older feminised man or guru, in which they find employment as dancers or sex workers. After their entry into sex work there is little or no opportunity to use condoms

Papua New Guinea

There are over 2 million young people aged 10-24 years in Papua New Guinea, making up an estimated 31% of the total population.¹ No national data on the prevalence of premarital sex among unmarried young people are available. Only two low quality studies that included SRH of unmarried adolescents. The first looked at women attending antenatal care in Port Moresby, and found that younger women and those who were unmarried were more likely to have unintended pregnancies.¹¹⁰ The second was a qualitative study exploring sexuality and gender in high school students. Findings suggest that sex was seen as a means of reproducing within marriage, and that young men were considerably more comfortable discussing sex and relationships than young women.¹⁹

Focus Area	Population	Setting	Study Design	Key Findings
Pregnancy ¹¹⁰	Females aged 15-49	Urban, health facility	Cross-sectional	<ul style="list-style-type: none"> Women under the age of 20 were more likely to have unintended pregnancies than older women, and unmarried women were more likely to have unintended pregnancies than married women.
Sexuality / gender ¹⁹	Females and males	School	Qualitative	<ul style="list-style-type: none"> Irrespective of gender, respondents predominately understood sex as being for the sole purpose of reproduction within marriage. When discussing sex and sexual relationships, young men used explicit language and referred specifically to sexual organs and activities. Young women did not. Less concerned for privacy, young men talked in public spaces and in groups with same-sex peers about sex and sexual expression, whereas young women discussed such matters one-on-one and in private.

Philippines

The Philippines has over 29 million young people aged 10-24 years, representing 31% of the total population.¹ National data indicate that 11% of young women aged 15-24 years have engaged in premarital sex, however there are no national estimates for young men.¹⁷⁰ Five eligible studies were identified: three were of medium quality and two were of low quality. A longitudinal cohort study in Cebu that was the basis of three of these articles concluded that a number of factors were associated with incidence of premarital sex, including the perception that friends were involved in any sort of dating or sexual behaviour.^{30, 41, 50} Males were found to engage in sexual activity at a younger age than females and gender differences in factors associated with sexual initiation were also identified. Another study found that although students valued their parents' opinions on love and sexuality, most obtained information from their friends and very few discussed these topics with their parents.¹⁵ A qualitative study exploring premarital sex among deaf students discussed engagement in sexual activity among this population, including reports of sexual abuse.⁸¹

Focus Area	Population	Setting	Study Design	Key Findings
Dating and relationships ¹⁵	Females and males aged 13-18	Schools	Cross-sectional	<ul style="list-style-type: none"> Students reported that they obtained information about love and sexuality mainly from friends. However, they valued parents' opinion more than friends'. They revealed few conversations with their parents on these topics. A majority of them would like to have more information, mainly about emotion-related topics Almost half of respondents were not aware that condoms are not 100% effective in preventing STIs or pregnancies. More girls, compared to boys, were sensitive and opposed to several types of sexism. After adjusting for sex, age and institution, the belief of 100% condom effectiveness and the approval of pornography and sexism were associated with being sexually experienced.
Premarital sex ⁴¹	Females and males aged 14-16 and 17-19	Urban, community	Cohort	<ul style="list-style-type: none"> Boys and girls, who at ages 14 to 16 years, perceived that their friends had ever had boyfriends/girlfriends, dated, held hands, kissed, petted or had sex were significantly more likely to have experienced that behaviour by ages 17 to 19 years For each additional behaviour an adolescent perceived his or her friends to have experienced, the hazard of having sex at a younger age increased by 1.15 among boys and 1.19 among girls, after adjusting for mothers'/ caretakers' disapproval of premarital sex and other factors.

Solomon Islands

Approximately 164,000 adolescents aged 10-24 years live in the Solomon Islands, making up around 31% of the total population.¹ National data suggests a high prevalence of premarital sexual activity among young people aged 15-24 years, with 70% of young men and 55% of young women reporting sex before marriage.¹⁷¹ Despite this, there is a paucity of evidence on the SRH of unmarried young people in the country, with only one low quality study having been identified. This study highlighted some barriers to the provision of adolescent-friendly sexual and reproductive health services including health worker attitudes, inadequate training for health workers, lack of knowledge and resource constraints.¹⁷²

Focus Area	Population	Setting	Study Design	Key Findings
Information and services ¹⁷²	Youth, health workers, teachers	Community, schools and health services	Mixed methods	<ul style="list-style-type: none"> Several barriers to providing adolescent friendly SRH services were identified including ambivalent health worker attitudes, knowledge gaps and inadequate training. Socio-cultural attitudes, resource and infrastructure constraints, and poor understanding of youth and SRH policy were also noted.

Sri Lanka

There are almost 5 million young people aged 10-24 years in Sri Lanka, making up approximately 24% of the total population.¹ No national data are available on the prevalence of premarital sex among young adults. Three studies, two of high quality and one of medium quality, were identified as part of this review. A study looking at condom use in school students found low rates among the 20% of males and 3% of females reporting penetrative sex.⁹³ Another study in schools found a low prevalence of sexual activity among young people, with more males than females engaging in premarital sex. Knowledge on SRH issues was poor, and health professionals were found to be the preferred source of information.¹⁰⁸ A qualitative study on abortion found that family pressure, partner's attitude and economic factors all impacted on unmarried young women's decisions to terminate their pregnancy.¹¹⁴

Focus Area	Population	Setting	Study Design	Key Findings
Abortion ¹¹⁴	Females aged 18-30	Health facility	Qualitative	<ul style="list-style-type: none"> • Becoming pregnant in a love relationship was predominant in this sample. • Awareness of contraceptives varied and initial reaction to the pregnancy involved strong contradictory emotions. • Multiple interrelated factors were considered in the decision-making for termination. Family pressure was the most prominent factor followed by the partner's qualities and attitude towards the pregnancy, economic factors and own feelings, values and future fertility. • The women described that their own emotional, religious and economic reasons for continuing the pregnancy were often outweighed by their responsibility to the family, male partner and unborn child.
Condoms ⁹³	Females and males aged 18-20	Urban and rural, schools	Cross-sectional	<ul style="list-style-type: none"> • Over half of the males and approximately one-third of the females reported that they had engaged in some form of sexual activity, with penetrative sexual experiences reported by 20.1% of males and 3.1% of females. • Only 26.5% of males and less than 10% of females reported having ever used a condom when participating in vaginal, anal or oral intercourse.

Thailand

Thailand is home to approximately 14 million young people aged 10-24 years, representing 21% of the population.¹ No national data on the prevalence of premarital sex among young people are currently available. A total of 29 studies were identified looking at the SRH of unmarried Thai adolescents: seven were of high quality, 11 were of medium and 11 were of low quality. Overall, the available evidence suggests that moderate numbers of unmarried young people engage in premarital sex, males are more likely to have sex before marriage and commence sexual activity from a younger age, condom use is inconsistent and risk perception is low. Attitudes towards young females engaging in sex outside of marriage tends to be considerably more conservative than for males, and dating violence is common and often seen as acceptable. Studies looking at young people living with HIV had similar findings, with low levels of condom use among those who reported engaging in premarital sex.^{74, 90}

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ⁹⁶	Females and males aged 18-21	Colleges	Cross-sectional	<ul style="list-style-type: none"> 66.7% had been sexually active, 28.3% of those reported that they never used condoms at the beginning of a sexual relationship, 31.7% reported that they had not used condoms the last few times they had engaged in sexual relationships, and 25.6% never used condoms in a sexual relationship. Adolescents who had positive attitudes about condoms those who had higher condom use self-efficacy were more likely to use condoms.
Condoms ⁸⁹	Men who have sex with men, male sex workers, transgender women aged 15-24 years	Urban, venues	Cross-sectional	<ul style="list-style-type: none"> 46.7% of men who have sex with men, 34.9% of male sex workers and 52.3% of transgender women reported recent inconsistent condom use. Receptive and insertive anal intercourse, living alone, a history of sexual coercion, not carrying a condom when interviewed, lower education, worrying about HIV infection and a history of sexually transmitted infections were significantly and independently associated with inconsistent condom use.
Condoms ⁹⁰	Females and males aged 16-25 living with HIV	Health facility	Cross-sectional	<ul style="list-style-type: none"> The proportion of youth with consistent condom use in the previous 30 days at baseline (55.6%) was comparable to the proportion at 3-month visit (58.3%). Men were more likely to have a partner with unknown HIV status and were less likely to disclose HIV status to their partners.
Condoms ⁸⁸	Male aged 15-24	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> A greater proportion of unmarried youth engaged in sexual activity before the age of 20 years compared with married youth, and condom-use was inconsistent. Unmarried youth were more three times more

				likely to perceive the risk of STIs and use condoms regularly with their partners than married men.
Dating and relationships ²⁹	Out-of-school females and males aged 17-20	Schools, venues	Mixed methods	<ul style="list-style-type: none"> Adolescents from different social and educational backgrounds had significantly different types of intimate relationships. Social class differences are mostly based on young people's educational backgrounds and their families' financial power. Perceptions of love and relationships were interpreted according to social strata and sex. Notably, less well-off young people were likely to engage in much riskier sexual relationships.
Dating and relationships ²⁸	Females and males aged 13-14 years	Urban, community	Cross-sectional	<ul style="list-style-type: none"> Participation in pre-sexual behaviours increases with age with the most common behaviours being holding hands, hugging and kissing on the cheek. The more intimate behaviours (kissing on the lips and mouth and touching breasts or other private parts) were reported by 10% or less of 14-year-old study participants with more experiences reported by boys. Positive direct and indirect associations of the spirituality of parents and teens within a family and the prevention of adolescent risk behaviours were significant and consistent.
Higher risk sex ⁷⁴	Male and female aged 14-21 years living with HIV	Health facility	Cross-sectional	<ul style="list-style-type: none"> 26% had ever had sex and 14% reported sex in the last 6 months. Of those who had ever had sex 29% reported multiple partners in the last 6 months and 58% had never used a condom. The scores of the sexual self-efficacy scale and its subscales were significantly lower in those aged 17 to 21 than in 14 to 16. Sexual risk behaviours were significantly higher in those aged 17 to 21 than in 14 to 16. The sexual self-efficacy scales were inversely related to the risk behaviours of having sex, having multiple partners, and drinking alcohol in the last 6 months.
Higher risk sex ¹⁷³	Females aged 15-24	Urban, slums	Cross-sectional	<ul style="list-style-type: none"> 55.8% were sexually active with 41.8% having had vaginal sex without a condom. Protective factors for risky sexual behaviour were decision-making dominance, perceived ability to say no, and ethical-related punishment avoidance thinking
Higher risk sex ¹⁷⁴	Females and males aged 18-24	Urban and rural, vocational	Cross-sectional	<ul style="list-style-type: none"> Geographic residence and negotiation for safer sex were related to ever having had sexual intercourse;

		schools		<ul style="list-style-type: none"> Gender, HIV knowledge, and negotiation for safer sex were related to the number of sexual partners; and geographic residence was related to condom use.
Higher risk sex ⁸⁰	Lesbian/bisexual females aged 18-24	Urban, venues	Cross-sectional	<ul style="list-style-type: none"> Nearly one-third of women aged 18–24 recruited from Chiang Mai drinking venues identified as lesbian/bisexual. As compared to their heterosexual counterparts, lesbian/bisexuals reported higher positive alcohol expectancy scores, more harmful drinking, earlier age at sexual debut, and higher number of lifetime sexual partners. ¹
HIV ¹⁷⁵	Females aged 12-14	Urban, school	Qualitative	<ul style="list-style-type: none"> Behaviours considered most likely to result in HIV infection of Thai adolescent females were having sex without protection and drug use, and the most likely situations placing them at HIV risk were pubs/bars and boyfriends' or friends' houses when there is no parental or adult supervision. Girls reported that HIV/AIDS-prevention programmes should provide education about the causes and dangers of sexually transmitted infections, including HIV/AIDS and prevention strategies.
HIV ¹⁰²	Females and males mean age 18	Urban, university	Cross-sectional	<ul style="list-style-type: none"> Knowledge, attitudes, self-awareness, and preventive behaviours toward HIV/AIDS were at a high level. Self-awareness, faculty, sex, sexual-risk score, income-per-month, GPA, and knowledge were identified as significant independent predictors of HIV/AIDS preventive behaviours.
Premarital sex ¹⁸	Females and males aged 15-19 years	Rural, community	Qualitative	<ul style="list-style-type: none"> Four themes were identified from the data: the social judgement of girls; boys have nothing to lose; considering risks and parents as problem solvers. All themes relate to the continuing existence of double standards concerning the social norm for premarital sex as applied to young women on one side and young men on the other. Findings suggest that female teens may have little control over sexual decision-making. They may be unable to negotiate condom use due to unequal power relations between boys and girls.
Premarital sex ³²	Females and males aged 15-21	Vocational schools	Cross-sectional	<ul style="list-style-type: none"> Males initiated sexual intercourse at an earlier age than females. Sexual initiation was associated with having a non-agricultural background and using alcohol or methamphetamine

				<ul style="list-style-type: none"> For males, initiation was also associated with having parents who did not live together, having a friend as a confidant, tobacco use, high perceived risk for HIV and high STI knowledge For females, other factors associated with earlier initiation were younger age at interview, living away from family, lacking a family member as a confidant, high perceived risk for STIs and ever having smoked marijuana
Premarital sex ⁴⁷	Females and males aged 17-20, out-of-school	Urban, community, schools	Cross-sectional	<ul style="list-style-type: none"> 62% of males and 34% of females had ever had sex with median age of first sex 16 for males and 17 for females. Out of school males had 2.3 increased odds of premarital sex, males whose parents were divorced 1.7 increased odds. Having ever consumed alcohol (OR 3.8), methamphetamines (OR 5.2) or tobacco (OR 2.5) were also associated with premarital sex. For females, out of school young women had 4.3 times increased odds of premarital sex; 2.8 increased odds if there was a history of parental conflict. Alcohol (OR 3.7) and smoking (3.5) were also associated with premarital sex.
Premarital sex ¹⁷⁶	Females aged 18-23	Urban, community	Qualitative	<ul style="list-style-type: none"> Young women used the basic social process they called "waiting for the right time" in order to maintain heterosexual abstinence. This involved honouring parental love, and included three overlapping properties: learning rules (such as conservative dress and behaviour, avoiding physical contact with males), planning life path (setting life goals), and ways of preserving virginity, including avoiding situations that might lead to sex.
Premarital sex ⁴⁰	Females and males aged 15-22	Urban, schools / universities	Cross-sectional	<ul style="list-style-type: none"> 14% of female and 36% of male secondary students had ever had sex. Adolescents who had had sex were less likely to report intention to use condoms than those who had never had sex. Females reported a higher intention to use condoms than males. Sexually experienced young people felt more pressure to have sex from peers than those who had never had sex, and males more so than females.
Premarital sex ¹⁷⁷	Females and males aged over 12 (mean age 15) living with	Urban, health facility	Cross-sectional	<ul style="list-style-type: none"> 35.2% reported pre-sexual activity, and 3.7% reported sexual activity. 96.3% knew that HIV could be transmitted sexually, but knowledge regarding other

	HIV			<p>sexually transmitted infections (STIs) was poor.</p> <ul style="list-style-type: none"> 48.1% had never disclosed their status to anyone.
Premarital sex ³⁹	Females and males aged 12-17	Urban and rural, schools	Cross-sectional	<ul style="list-style-type: none"> The prevalence of sexual intercourse in the past 12 months was 11.0% (14.6% males and 7.6% females). Variables positively associated with sex in the last 12 months were male gender, older age, current alcohol use, psychosocial distress and among females current smoking, lifetime drug use and lack of parental or guardian bonding
Premarital sex ⁴⁴	Females and males aged 17-20, out-of-school	Urban, community, schools	Mixed methods	<ul style="list-style-type: none"> 62% of males and 34% of females had ever had sex with median age of first sex 16 for males and 17 for females. Ever having sex was more common among out of school young people than university or vocational school students. Boy/girlfriend was the most commonly reported sexual partner. 10% of males and 7% of females reported that the most recent partner was the same sex. Condom was the most commonly used method to prevent STI or pregnancy - however only 47% of males and 29% of females reported using a condom at last sex. 9% of males and 26% of females had experienced forced or coerced sex.
Premarital sex ⁴³	Females and males aged 13-19	Rural, community	Qualitative	<ul style="list-style-type: none"> Factors contributing to low sexual risk behaviour were helping family to do housework, an emphasis on learning, listening to parents, and following their advice. Behaviour leading to high sexual risk included being very close to friends, having a wide social circle, going out for enjoyment at night time, returning home late at night, drinking alcohol, smoking, paying less attention to learning, not listening to parents, and not following their advice. Important influences on sexual behaviour were: eagerness to learn and try to have sex, men's sexual desire, peer group value of having sex, and material value. Females had little power to negotiate condom use.
Premarital sex ⁴⁵	Females aged 15-24	Urban, slums	Cross-sectional	<ul style="list-style-type: none"> Among the sexually active, 68.8% had vaginal or anal sexual intercourse (11.7%)

				<p>without using a condom.</p> <ul style="list-style-type: none"> • Significant enabling predictors among the sexually active included sexual self-efficacy, whereas punishment avoidance thinking (negative consequence) had a negative influence. • Among sexually non-active, alcohol consumption, power in a relationship (decision making dominance), and gain thinking (relationship) accounted for 26.9% of the variance in explaining sexual behaviour.
Sexuality / gender ¹⁷	Females and males aged 12-18 years	Urban and rural, schools	Mixed methods	<ul style="list-style-type: none"> • Five important influences on adolescents' sexual attitudes and behaviour were noted: ambiguous social roles; heightened sexual awareness and curiosity; gaps in knowledge and skills; limited parental input; impulsivity and risk-taking. • Males' status depends on sexual performance; females experience traditional conservative norms and have to manage dating relationships in the context of no parental support and limited life skills to negotiate relationships.
Sexuality / gender ¹⁷⁸	Females and males aged 12-14	Urban, schools	Qualitative	<ul style="list-style-type: none"> • Sexual identity was perceived by Thai adolescents to include: biological sex; gender role; gender identity; and, sexual orientation. Biological sex was perceived as female or male, based on one's sexual organs, while gender role, feminine or masculine, was perceived through external appearances including clothing, personality and manners. • With respect to gender identity, girls expressed pride in potentially becoming a mother and being protected, but were conflicted about female characteristics and being disadvantaged when compared to males. Boys were proud of being strong, being gentlemen and having freedom. Family upbringing, the media and school environment were factors perceived to be related to sexual identity.
STIs ¹⁰³	Female and males 18-25 year old methamphetamine users	Urban, venues	Cross-sectional	<ul style="list-style-type: none"> • 38% of participants had at least one laboratory confirmed STI. Herpes simplex virus and Chlamydia were significantly more common among women, whereas hepatitis B virus was significantly more common among men. • Men reported a greater number of sexual partners than women, and condom use at last sex was infrequent. • Women > or =20 years of age, with > or =2

				<p>heterosexual partners in the past year and a younger age at sexual debut were significantly more likely to have a prevalent STI.</p> <ul style="list-style-type: none"> Men > or =20 years of age, with > or =2 heterosexual partners in the past year and who enrolled both sex and drug network members were significantly more likely to have a prevalent STI, whereas men who used a condom at last sex were significantly less likely to have a prevalent STI.
STIs ¹⁰⁴	Females and males aged 15-21	Urban, schools	Cross-sectional	<ul style="list-style-type: none"> From 1999 to 2002 chlamydia prevalence increased from 3.2% to 7.5% in women and from 2.5% to 6.0% in men. There was an increase in the reported mean lifetime number of steady sexual partners among both men and women, and in the mean lifetime number of casual partners among men and women. Reported consistent condom use decreased significantly among women with casual partners but not among men. Risk of STI was associated with lifetime history of 4 or more partners.
Violence and / or coercion ⁶¹	Females aged 15-17	Urban, school	Qualitative	<ul style="list-style-type: none"> Participants stated that a romantic relationship was likely to deteriorate or end sooner after partners had engaged in premarital sex, and believed engaging in sexual intercourse decreased men's respect for their partners as well as one's own self-esteem. Sexually violent acts rarely were included in the definition of dating violence. Participants described three different categories of causes of dating violence: (a) individual characteristics and circumstances (e.g., poor temper and anger management, wanting to dominate a partner, use of physical power to solve conflicts); (b) situations related to the relationship (partners' flirtatiousness and subsequent jealousy, lack of open communication, mistrust of the partner, financial problems); and (c) raised in a family in which parents used physical, emotional, or verbal violence to solve disagreements
Violence and/or coercion ⁶²	Females and males aged 14-19, out-of-school	Urban, community, school	Cross-sectional	<ul style="list-style-type: none"> Thai youths maintain very intensive dating relationships. The out-of-school adolescents hold the highest violent dating behaviours. While males' dating violence scores were higher, the females were involved in all types

				of dating violence, exceeding the males on verbal/emotional violence.
Violence and/or coercion ⁵⁹	Females and males aged 14-19, out-of-school	Urban, community, school	Cross-sectional	<ul style="list-style-type: none"> • Thai youths in general reported attitudes that were supportive of dating violence. • The variables more closely related to attitudes toward dating violence were personal variables. Peer influence, partner relationships, and family characteristics were related to higher support for dating violence. • Females reported higher endorsement of dating violence than males.

Tonga

There are approximately 31,000 young people aged 10-24 years in Tonga, representing 30% of the total population.¹ No national data on the prevalence of premarital sex among young adults are available. Two studies reporting on the SRH of unmarried young people in Tonga were found, one of medium quality and one of low quality. The first study was a qualitative article looking at attitudes towards and utilisation of condoms.²² While positive attitudes towards condoms were found, levels of utilisation were low. Potential barriers to using condoms included gender norms and socio-cultural beliefs around premarital sex and promiscuity that impacted on access to condoms. A study on higher risk sex found that over one third of out-of-school youth were sexually active. Although young men were more likely to engage in high-risk sexual behaviour, over 60% of sexually active young women reported never using protection against STIs.⁷⁰

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ²²	Females and males aged 18-25	Urban, community	Qualitative	<ul style="list-style-type: none"> Young people had positive attitudes towards condoms (protection against STIs, HIV and pregnancy) but reported very low use of condoms among young people in their communities. Reasons for non-use related to: socio-cultural beliefs and attitudes (stigma associated with premarital sex, condoms associated with promiscuity, transactional sex) that impacted on young people's access to condoms and contributed to shame / embarrassment; gender norms; and to a lesser extent perceptions about negative impacts of condoms on intimacy and male pleasure.
Higher risk sex ⁷⁰	Out-of-school females and males aged 15-19	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> 35.5% of Tongan youth surveyed were sexually active Young men were more likely to engage in sexually risky behaviour than young women. They were more likely to be sexually active, have had multiple sexual partners and have had sex when drunk or high. Among sexually active youth, the proportion of females (61.1%) who reported never using protection against STIs was nearly double the proportion reported by Tongan males (32.2%).

Vanuatu

With an estimated 73,000 people aged between 10 and 24 years, young people make up 31% of the population of Vanuatu.¹ Premarital sex is relatively common according to available national data, with 30% of young women aged 15-24 years reporting sex before marriage and 50% of young men.¹⁷⁹ Four studies relating to the SRH of unmarried young people in Vanuatu were identified: one high quality, two of medium quality and one low quality. The study looking at higher risk sex supports national estimates with the finding that 49.7% of youth were sexually active, with young men more likely to engage in higher risk sexual behaviours.⁷⁰ Two qualitative articles explored SRH information and services for young people.^{116, 123} Findings highlighted important gaps in sexuality education and underutilisation of many important sources of information. A number of barriers preventing young people from accessing youth-friendly services were identified including cultural norms and taboos, lack of confidentiality and attitudes of service providers. Another qualitative study found positive attitudes towards condoms but low levels of condom utilisation.²² Access and socio-cultural beliefs were highlighted as barriers to condom use.

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ²²	Females and males aged 18-25	Urban	Qualitative	<ul style="list-style-type: none"> Young people had positive attitudes towards condoms (protection against STIs, HIV and pregnancy) but reported very low use of condoms among young people in their communities. Reasons for non-use related to: socio-cultural beliefs and attitudes (stigma associated with premarital sex, condoms associated with promiscuity, transactional sex) that impacted on young people's access to condoms and contributed to shame / embarrassment; gender norms; and to a lesser extent perceptions about negative impacts of condoms on intimacy and male pleasure.
Higher risk sex ⁹⁵	Out-of-school females and males aged 15-19	Urban and rural	Cross-sectional	<ul style="list-style-type: none"> 49.7% of youth surveyed were sexually active Young men were more likely to engage in sexually risky behaviour than young women. They were more likely to be sexually active, have had multiple sexual partners and have had sex when drunk or high. Of those who were sexually active, more young men than women (36.1% compared with 30.6%) never used protection against STIs.
Information and services ¹¹⁶	Females and males aged 15-19	Urban and rural, community, schools	Qualitative	<ul style="list-style-type: none"> Available SRH information focused on sexually transmitted infections and HIV; while this was valued, important gaps were identified including prevention of pregnancy, condom use, puberty, sexuality and relationships. Peer educators and health workers were adolescents' preferred sources of information Schools were an important but underutilised source of information, as were a range of media sources.

Information and services ¹²³	Females and males aged 15-19	Urban and rural, community, schools	Qualitative	<ul style="list-style-type: none"> • Socio-cultural norms and taboos regarding adolescent sexual behaviour were the most significant factors preventing adolescents from accessing services. • Lack of confidentiality and privacy, costs, and adolescents' lack of SRH knowledge were also important barriers. • The most important feature of a youth-friendly health service described by adolescents was a friendly service provider.
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Viet Nam

There are almost 25 million young people aged 10-24 years in Viet Nam, representing 28% of the population.¹ National data suggests low levels of premarital sex among young adults aged 15-24 years, with 3% of young men reporting sex before marriage and less than 1% of young women.¹⁸⁰ Eleven studies were identified looking at the SRH of unmarried young people in Viet Nam; two were of high quality and nine of medium quality. The seven studies focusing on premarital or higher risk sex found conservative views among young people of sex outside of marriage, less permissive attitudes towards young women having premarital sexual relationships, and associations between sexual risk behaviours and other risk behaviours such as alcohol consumption and smoking.^{23, 25, 26, 134, 181, 182} Condom use is low, particularly among young women.⁹⁴ Common misconceptions around contraception and sexuality suggest that sexual education is inadequate, and many young people, especially women, do not feel comfortable discussing SRH and needs with their parents.

Focus Area	Population	Setting	Study Design	Key Findings
Condoms ⁹⁴	Females and males aged 14-25 who had engaged in premarital sex	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> 28.6% of young people reported condom use at first sexual intercourse. Condom use at sexual debut was less common in females than males and less common in those who experienced peer pressure to engage in social higher risk behaviours. Condom use was more common if a friend/acquaintance or a stranger/sex worker was the first sexual partner compared with fiancé/boyfriend/girlfriend.
Higher risk sex ⁷⁶	Females and males aged 16-24	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> 25.8% of respondents had engaged in sexual touching with boy/girl friends, and 10.1% had engaged in vaginal sex, anal sex, and/or oral sex. Alcohol use was significantly associated with engagement in sexual experiences. 40% of young men who did not use condom in last sex and 45% of young men who had multiple sex partners were drinkers compared to 4.8% and 1.6% of non-drinkers, respectively.
Information and services ¹¹⁷	Females and males aged 15-19	Urban, venue	Qualitative	<ul style="list-style-type: none"> Respondent narratives reflect the complex processes of sexual identity formation and relationship development, showing how young Vietnamese consume and then incorporate imagery and information from the Internet into their sexual performances, experimenting with some of the suggestions and then relaying the outcomes to others through online discussions.
Multiple topics ¹⁸³	Females and males aged 15-20	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> About a third of both males and females reported having ever had a girlfriend or boyfriend. However, sexual activity was relatively uncommon: 19% of males and 4% of females reported having ever engaged in sexual touching, and only a few males (and no females) said they had had oral sex (2%) or vaginal sex (3%) Most parents said they were “uncomfortable” or “very uncomfortable” discussing sexuality with their

				<p>sons and daughters. Parents with more education spoke with their children about these topics more frequently, and with less discomfort, than less-educated parents.</p> <ul style="list-style-type: none"> The most common barriers to talking about sexuality were concern that the child would become more interested in sex (87%), parental embarrassment (65%), lack of time (65%), and feeling uninformed (63%).
Multiple topics ¹²¹	Females and males aged 15-24	Urban, health facility	Qualitative	<ul style="list-style-type: none"> Fears of side effects of taking pills and rumours and beliefs regarding condoms were quite common Sexual education provided by educational institutions and within families did not provide clear knowledge on the sensitive topics such as contraceptive methods, and other issues related to sexuality While sex issues were discussed openly among unmarried men, most unmarried women felt uncomfortable or expressed difficulty when talking about these issues; and the passiveness of women in making the decision of using condoms as well as contraceptives was marked
Premarital sex ¹⁸²	Females and males aged 15-21	Rural, community	Mixed methods	<ul style="list-style-type: none"> In the qualitative interviews, youth reported a strong adherence to ideals and values regarding abstinence outside of marriage. Youth reported low rates of engagement in vaginal, anal, and/or oral sex. A total of 15 of 32 (46.9%) sexually active youths reported rarely or never using condoms. Females had significantly higher scores for perceived sexual stigma than males whereas males scored significantly lower than females on a scale of perceived self-efficacy for abstinence.
Premarital sex ²⁵	Females and males aged 15-24	Urban, health facility	Qualitative	<ul style="list-style-type: none"> There were two general attitudes towards premarital sex: one view supported young people in a serious, loving relationship engaging in sex before marriage; the other opposed premarital sex because it affected the reputation of girls and their families. Young men considered sex a way to express their love and to become more intimate. Women's view was that premarital sex only occurred within a serious, loving relationship or when there was a serious commitment to marriage.
Premarital sex ²³	Females and males aged 15-49	Urban and rural, community	Cross-sectional	<ul style="list-style-type: none"> 17.7% of young unmarried men were accepting of men having sex before marriage, compared with 10.3% of young women. For women, 12.3% of young men were accepting of premarital sex versus 5.6% of young women.
Premarital	Females	Urban,	Cross-	<ul style="list-style-type: none"> Among the 72.4% of students who had ever had

sex ¹⁸¹	aged 19-27	university	sectional	<p>boyfriends, 44.8% indicated that their boyfriends had asked for sex, 13% had had penile-vaginal sex and 10.3% had had oral sex.</p> <ul style="list-style-type: none"> • For those who had had penile-vaginal sex, 33% did not use any contraceptive method, including condoms, during their first sexual intercourse. • The greater a student's perception that women were subordinate to men, the lower her self-efficacy for sexual communication and the lower her actual frequency of discussing safer sex matters and asking her partner to use a condom.
Premarital sex ¹³⁴	Females and males aged 15-24	Urban	Cross-sectional	<ul style="list-style-type: none"> • Sexual behaviour was associated with seven nonsexual risk behaviours, especially with smoking, drinking, drug use, and running away from home. Smoking and drinking were usually initiated before sexual intercourse. • Sexual behaviour and nonsexual risk behaviours co-occurred in the high-risk group in Hanoi. Youth having the highest risk of sexual behaviour were more likely to have the highest risk of nearly all nonsexual risk behaviours, with the exception of fighting.
Premarital sex ²⁶	Females and males aged 15-24	Urban	Cross-sectional	<ul style="list-style-type: none"> • Male respondents in each city held more permissive attitudes toward premarital sex than did females, with both boys and girls expressing greater permissiveness to male premarital sexual behaviours. • Adolescents' gender-role attitudes and permissiveness to premarital sex varied considerably across the three cities, with the Vietnamese the most traditional.

DISCUSSION AND RECOMMENDATIONS

Despite some important gaps, there has been an increasing evidence-base regarding the SRH of young unmarried people in Asia and the Pacific over the last 10 years. Available literature indicates that while the prevalence of premarital sex varies within the region, it is not uncommon. Young males are much more likely to report premarital sex than females, in part reflecting the persisting strong sociocultural norms prohibiting sex outside of marriage among adolescent girls and young women. However, there is some evidence that initiation of sex before marriage is also increasing among females, particularly in the context of increasing age of marriage, as noted by a recent review of young people's SRH in the region.⁸

Most unmarried young people have heard of HIV and STIs, however comprehensive knowledge, including of condoms and contraception, is low. Insufficient knowledge and misconceptions contribute in part to low risk perception and low uptake of key services among this population. Additionally, unmarried young people report significant barriers that limit their access to quality, comprehensive information concerning SRH, with some evidence that they are increasingly turning to non-traditional sources of information such as the internet and pornography. There are also considerable barriers limiting unmarried young people's access to SRH services and commodities, most notably socio-cultural and gender norms that contribute to shame, stigma, and negative attitudes of health providers.

Among those young people who are engaging in sexual activity, higher risk sexual behaviours are common, particularly so among males and marginalised young people. Sexual risks are often clustered together, and also clustered with other adolescent risks such as alcohol and drug use, disengagement with formal education, poor family support, and violence. Gender norms are also an important contributor to sexual risk, reducing girls' negotiating and decision-making power with respect to safe, consensual sex and also placing pressure on boys to engage in higher risk behaviours. Premarital sexual activity often occurs in the context of low use of condoms and contraception, putting young people at risk of adverse SRH outcomes. Additionally, there is some limited evidence of high rates of sexual violence and coercion, most notably among adolescent girls, young women and transgender young people. The current evidence base in the region is limited, however available studies indicate that higher risk sex, non-use of condoms and contraception, and violence are associated with poor outcomes such as unintended pregnancy and STIs.

While the currently available information provides a useful basis for informing policy and programs there are some substantial knowledge gaps that need to be addressed:

Age

Most identified studies included young people aged 15-24 years. A quarter included adolescents younger than 15 years, however only three studies sampled adolescents from the age of 10. There are some specific methodological considerations when conducting SRH research with young adolescents,³ however 10-14 year olds are an important and often neglected population. Young adolescents have a considerable need for age-appropriate information and services related to puberty and SRH. This age typically corresponds with important developmental milestones (such as menarche and semenarche) as well as increasing curiosity in sex, dating behaviours and initiation of physical intimacy.³ Some young adolescents also report early onset of sexual activity (oral, vaginal, and/or anal sex), often in the context of very low knowledge and use of condoms and contraception. This group have among the highest risk of sexual coercion and violence, higher risk sexual behaviours, and poor health outcomes.³

⁸ Therefore there is a critical need for better information about young adolescents' knowledge, behaviours and SRH determinants to inform effective responses.

In addition to omitting young adolescents, many studies were excluded from this review, despite sampling young unmarried people, because data were not disaggregated by both age and marital status.

RECOMMENDATION 1: *Increase the inclusion of young adolescents aged 10-14 years in national and sub-national studies, and ensure disaggregation of data by both marital status and age.*

Population

The majority of studies were conducted in schools, colleges or universities (exclusively or in part). Educational attainment has been increasing across the region, making formal education institutions an important setting for reaching unmarried young people. However, rates of engagement in middle and upper secondary school remain low in South Asia, and parts of South East Asia and the Pacific, particularly among females, and up to a third of lower secondary school aged adolescents are out-of-school.^{184, 185} Available studies indicate that young people not engaged in formal education have higher rates of premarital sex and higher risk sexual behaviour, however only nine studies focused specifically on this population. Young migrants and the urban poor also have distinct SRH needs, but only 14 studies included these young people. Only one study included young people living with a disability and none focused on humanitarian settings, despite these populations being at particular risk of adverse SRH outcomes.¹⁸⁶

Identification of the SRH needs of young key populations was beyond the scope of this review. However a recent review conducted by Schunter et al reported high SRH needs in this important group of young people and noted the dearth of studies including key populations under the age of 25 years.¹⁸⁷ Similarly, the recent report completed for UNFPA Asia Pacific Regional Office noted a general lack of data concerning SRH of young key populations, including young people living with HIV.⁸

RECOMMENDATION 2: *Improve the inclusion of disadvantaged or marginalised unmarried young people in SRH research, particularly those who are out-of-school, economically disadvantaged, migrants, living with disability, and young key populations.*

Three countries (India, Thailand and China) accounted for more than half of all identified studies, with no studies identified for 15 countries (42% of countries included). South East Asia was the best-covered region, with at least one study identified in all but one country. The Pacific had the poorest coverage: only six of 15 countries had at least one study and only Vanuatu had more than two published studies in the past 10 years. Given the considerable socio-cultural, economic and geographical diversity across the Asia and Pacific region these gaps are significant.

RECOMMENDATION 3: *Increase investment, and support local capacity development, in young people's SRH research in under-represented countries and regions, particularly the Pacific.*

SRH topics

Encouragingly, a large number of identified studies reported sexual behaviours of unmarried males and females. The majority of these reported penetrative vaginal intercourse, with few describing dating behaviours or other sexual acts such as oral or anal sex. Only five studies explored non-heterosexual behaviour and experimentation, and none disaggregated data by sexual orientation (excluding those studies focused exclusively on young people who identify as same-sex attracted). Such information is important to better understand the patterns, progression and context of unmarried

young people's romantic and sexual relationships and identify opportunities to improve the content, delivery and timing of SRH interventions.

Additionally, there were very limited studies reporting contraceptive use among this age group, with the majority reporting condom use only. Similarly there is a paucity of studies examining abortion, particularly in settings where it is highly legally restricted. Few studies focused on, or included measures of, sexual coercion and violence among this population, despite this having significant policy and programming implications. There were also relatively few studies specifically exploring unmarried young people's barriers and preferences in relation to the delivery of SRH information and youth-friendly health services that would help to inform the development and implementation of national standards. Finally, only 16 of the 163 studies measured SRH outcomes of which the majority reported pregnancy and/or abortion as the major outcomes of interest.

RECOMMENDATION 4: *Address important knowledge gaps in current SRH research, including dating behaviours, sexual activity in addition to penetrative vaginal sex (including non-heterosexual activity), contraceptive use, abortion and sexual violence. Other key needs include greater research exploring information and service delivery preferences of unmarried young people and studies reporting key SRH outcomes (including biological measures).*

Young people in Asia and the Pacific live in diverse and rapidly changing contexts that have important implications for their SRH. Increasing age of marriage, access to education and media, urbanisation and globalisation are contributing to changing sexual values, norms and behaviours, such that young unmarried people will be an increasingly important target of SRH policy and programming.⁸ This review has identified some key SRH needs and determinants to help inform effective responses, however significant knowledge gaps remain. In addition to increasing the inclusion of young adolescents, marginalised young people, under-represented countries, and neglected SRH topics, there is also a need to consolidate and synthesise the evidence for effective interventions addressing SRH in this region. While beyond the scope of this review, there has been a proliferation of intervention studies, reviews and systematic reviews examining interventions to improve adolescent SRH, however further research is needed to identify approaches and delivery platforms that address the needs of unmarried young people in this region.^{8, 187-191} Addressing these research gaps is critical to ensuring universal access to SRH for all young people.

REFERENCES

1. UN. World Population Prospects. 2012 Revision. New York: UN. (Asia and Oceania data) available on-line: <http://esa.un.org/wpp/Excel-Data/population.htm>.] 2012. <http://esa.un.org/wpp/Excel-Data/population.htm> (accessed 01/06/2015).
2. Sawyer SM, Afifi RA, Bearinger LH, et al. Adolescence: a foundation for future health. *Lancet* 2012; **379**(9826): 1630-40.
3. WHO. The sexual and reproductive health of younger adolescents: research issues in developing countries. Geneva: World Health Organisation, 2011.
4. WHO. Health for the world's adolescents. A second chance in the second decade. Geneva: World Health Organisation, 2014.
5. UNESCO. Review of policies and strategies to implement and scale up sexuality education in Asia and the Pacific. Bangkok: UNESCO Bangkok Asia and Pacific Regional Bureau for Education, 2012.
6. UNESCO. Young people and the law in Asia and the Pacific: a review of laws and policies affecting young people's access to sexual and reproductive health and HIV services. Bangkok: UNESCO, UNFPA, UNAIDS, UNDP and Youth LEAD, 2013.
7. WHO SEARO. Scaling up adolescent health in South-East Asia. Report of Regional Programme Managers' meeting. Bangkok, Thailand, 11-14 October 2011. Bangkok: World Health Organisation Regional Office for South-East Asia, 2011.
8. Kennedy E, Willenberg L, Mohamed Y, Luchters S. Sexual and reproductive health of young people in Asia and the Pacific. A review of issues, policies and programs: Burnet Institute, UNFPA Asia Pacific Regional Office, UNESCO, WHO, 2015.
9. UN. Convention on the Rights of the Child: United Nation General Assembly, 1989.
10. UN. International Covenant on Economic, Social and Cultural Rights. Treaty series, vol. 933, p. 3: United Nations General Assembly, 1966.
11. UNFPA. International Conference on Population and Development. A/CONF.171/13/Rev.1 -- Report on the ICPD: United Nations Population Fund, 1994.
12. CASP. Critical Appraisal Skills Programme qualitative checklist. 2014. http://media.wix.com/ugd/dded87_29c5b002d99342f788c6ac670e49f274.pdf (accessed 20/11/2015).
13. EPHPP. Effective Public Health Practice Project, quality assessment tool for quantitative studies. 1998. [http://www.ehphp.ca/PDF/Quality Assessment Tool_2010_2.pdf](http://www.ehphp.ca/PDF/Quality%20Assessment%20Tool_2010_2.pdf) (accessed 20/11/2015).
14. Jaya J, Hindin MJ. Premarital romantic partnerships: attitudes and sexual experiences of youth in Delhi, India. *International perspectives on sexual & reproductive health* 2009; **35**(2): 97-104.
15. de Irala J, Osorio A, Lopez del Burgo C, et al. Relationships, love and sexuality: what the Filipino teens think and feel. *BMC Public Health* 2009; **9**: 282.
16. van Reeuwijk M, Nahar P. The importance of a positive approach to sexuality in sexual health programmes for unmarried adolescents in Bangladesh. *Reproductive Health Matters* 2013; **21**(41): 69-77.
17. Vuttanont U, Greenhalgh T, Griffin M, Boynton P. "Smart boys" and "sweet girls" -- sex education needs in Thai teenagers: a mixed-method study. *Lancet* 2006; **368**(9552): 2068-80.
18. Sridawuang C, Crozier K, Pfeil M. Attitudes of adolescents and parents towards premarital sex in rural Thailand: a qualitative exploration. *Sex Reprod Healthc* 2010; **1**(4): 181-7.
19. Kelly A, Worth H, Akuani F, et al. Gendered talk about sex, sexual relationships and HIV among young people in Papua New Guinea. *Culture, Health & Sexuality* 2010; **12**(3): 221-32.
20. Ghule M, Donta B. Correlates of sexual behaviour of rural college youth in Maharashtra, India. *Eastern Journal of Medicine* 2011; **16**(2): 122-32.
21. Wong LP. An exploration of knowledge, attitudes and behaviours of young multiethnic Muslim-majority society in Malaysia in relation to reproductive and premarital sexual practices. *BMC Public Health* 2012; **12**: 865.
22. Rahman AA, Rahman RA, Ismail SB, et al. Factors associated with attitude toward premarital sexual activities among school-going adolescents in Kelantan, Malaysia. *Asia-Pacific journal of public health / Asia-Pacific Academic Consortium for Public Health* 2015; **27**(2): NP1549-56.
23. Do M, Fu H. Attitudes toward premarital sex in contemporary Vietnam: findings from a national survey. *International Journal of Sexual Health* 2010; **22**(2): 103-18 16p.
24. Wang B, Li X, Stanton B, et al. Sexual attitudes, pattern of communication, and sexual behavior among unmarried out-of-school youth in China. *BMC Public Health* 2007; **7**: 189.
25. Nguyen HN, Liamputtong P. Sex, love and gender norms: sexual life and experience of a group of young people in Ho Chi Minh City, Vietnam. *Sex Health* 2007; **4**(1): 63-9.
26. Zuo X, Lou C, Gao E, Cheng Y, Niu H, Zabin LS. Gender differences in adolescent premarital sexual permissiveness in three Asian cities: effects of gender-role attitudes. *J Adolesc Health* 2012; **50**(3 Suppl): S18-25.
27. Bhugra D, Mehra R, de Silva P, Bhintade VR. Sexual attitudes and practices in North India: A qualitative study. *Sexual and Relationship Therapy* 2007; **22**(1): 83-90.
28. Chamratrithirong A, Miller BA, Byrnes HF, et al. Spirituality within the family and the prevention of health risk behavior among adolescents in Bangkok, Thailand. *Soc Sci Med* 2010; **71**(10): 1855-63.
29. Tangmunkongvorakul A, Carmichael G, Banwell C, Seubsman SA, Sleigh A. Intimate relationships among adolescents in different social groups in northern Thailand. *Southeast Asian Journal of Tropical Medicine & Public Health* 2010; **41**(6): 1475-93.
30. Upadhyay UD, Hindin MJ, Gultiano S. Before first sex: gender differences in emotional relationships and physical behaviors among adolescents in the Philippines. *International Family Planning Perspectives* 2006; **32**(3): 110-9 10p.
31. Kumar GA, Dandona R, Kumar SG, Dandona L. Behavioral surveillance of premarital sex among never married young adults in a high HIV prevalence district in India. *AIDS & Behavior* 2011; **15**(1): 228-35.
32. Liu A, Kilmarx P, Jenkins RA, et al. Sexual initiation, substance use, and sexual behavior and knowledge among vocational students in northern Thailand. *International Family Planning Perspectives* 2006; **32**(3): 126-35.
33. Simbar M, Tehrani FR, Hashemi Z. Reproductive health knowledge, attitudes and practices of Iranian college students. *Eastern Mediterranean Health Journal* 2005; **11**(5-6): 888-97.
34. Regmi PR, Simkhada P, van Teijlingen ER. "There are too many naked pictures found in papers and on the net": factors encouraging premarital sex among young people of Nepal. *Health Science Journal* 2010; **4**(3): 169-81.
35. Dave VR, Makwana NR, Yadav BS, Yadav S. A Study on High-risk Premarital Sexual Behavior of College Going Male Students in Jamnagar City of Gujarat, India. *International journal of high risk behaviors & addiction* 2013; **2**(3): 112-6.
36. Chi X, Yu L, Winter S. Prevalence and correlates of sexual behaviors among university students: a study in Hefei, China. *BMC Public Health* 2012; **12**: 972.
37. Alexander M, Garda L, Kanade S, Jejeebhoy S, Ganatra B. Correlates of premarital relationships among unmarried youth in Pune district, Maharashtra, India. *International Family Planning Perspectives* 2007; **33**(4): 150-9.

38. Farahani FK, Cleland J, Mehryar AH. Associations between family factors and premarital heterosexual relationships among female college students in Tehran. *International perspectives on sexual & reproductive health* 2011; **37**(1): 30-9.
39. Peltzer K, Pengpid S. Prevalence and Social Correlates of Sexual Intercourse among School-Going Adolescents in Thailand. *Scientific World Journal* 2011; **11**: 1812-20.
40. Srisuriyawet R, Fongae W, Villaruel AM. Gender and sexual experience differences in adolescent sexual behavior in Thailand: psychosocial factors. *Thai Journal of Nursing Research* 2006; **10**(3): 215-27.
41. Upadhyay UD, Hindin MJ. Do perceptions of friends' behaviors affect age at first sex? Evidence from Cebu, Philippines. *J Adolesc Health* 2006; **39**(4): 570-7.
42. Htay SS, Oo M, Yoshida Y, Harun-Or-Rashid M, Sakamoto J. Risk behaviours and associated factors among medical students and community youths in Myanmar. *Nagoya J Med Sci* 2010; **72**(1-2): 71-81.
43. Saranrittichai K, Sritanyarat W, Ayuwat D. Adolescent sexual health behavior in Thailand: implications for prevention of cervical cancer. *Asian Pac J Cancer Prev* 2006; **7**(4): 615-8.
44. Tangmunkongvorakul A, Carmichael G, Banwell C, Seubsman SA, Sleight A. Coital Experience Among Adolescents in Three Social-Educational Groups in Urban Chiang Mai, Thailand. *Asian Popul Stud* 2012; **8**(1): 39-63.
45. Powwattana A, Ramasoota P. Differences of sexual behavior predictors between sexually active and nonactive female adolescents in congested communities, Bangkok metropolis. *J Med Assoc Thai* 2008; **91**(4): 542-50.
46. Li S, Huang H, Cai Y, Xu G, Huang F, Shen X. Characteristics and determinants of sexual behavior among adolescents of migrant workers in Shanghai (China). *BMC Public Health* 2009; **9**: 195-.
47. Tangmunkongvorakul A, Carmichael G, Banwell C, Utomo ID, Sleight A. Sexual perceptions and practices of young people in Northern Thailand. *Journal of youth studies* 2011; **14**(3): 315-39.
48. Ray S, Mishra SK, Das BM. Sexual and reproductive health issues among rural and urban adolescent boys of eastern India. *Journal of Men's Health* 2012; **9**(2): 94-101.
49. Gb BC, Basel PL. Premarital sex behaviors among college youths of Kathmandu, Nepal. *Kathmandu University Medical Journal* 2013; **11**(41): 27-31.
50. Gipson JD, Hicks AL, Gultiano SA. Gendered Differences in the Predictors of Sexual Initiation Among Young Adults in Cebu, Philippines. *Journal of Adolescent Health* 2014; **54**(5): 599-605.
51. Lopez JR, Mukaire PE, Mataya RH. Characteristics of youth sexual and reproductive health and risky behaviors in two rural provinces of Cambodia. *Reproductive Health* 2015; **12**(1).
52. Lam CB, Chan DK. The use of cyberpornography by young men in Hong Kong: some psychosocial correlates. *Arch Sex Behav* 2007; **36**(4): 588-98.
53. Hald GM, Mulya TW. Pornography consumption and non-marital sexual behaviour in a sample of young Indonesian university students. *Culture, Health & Sexuality* 2013; **15**(8): 981-96.
54. Manaf MRA, Tahir MM, Sidi H, et al. Pre-marital sex and its predicting factors among Malaysian youths. *Comprehensive Psychiatry* 2014; **55**(SUPPL. 1): S82-S8.
55. Sahay S, Nirmalkar A, Sane S, Verma A, Reddy S, Mehendale S. Correlates of sex initiation among school going adolescents in Pune, India. *Indian J Pediatr* 2013; **80**(10): 814-20.
56. Alam N, Roy SK, Ahmed T. Sexually harassing behavior against adolescent girls in rural Bangladesh: implications for achieving millennium development goals. *Journal of Interpersonal Violence* 2010; **25**(3): 443-56.
57. Jaya J, Hindin MJ. Nonconsensual sexual experiences of adolescents in urban India. *Journal of Adolescent Health* 2007; **40**(6): 573.e7-14.
58. Santhya KG, Francis Xavier AJ. Non-consensual sex within pre-marital relationships: experiences of young women in India. *Culture, Health & Sexuality* 2014; **16**(1): 30-46.
59. Pradubmook-Sherer P. Youth attitudes toward dating violence in Thailand. *International Journal of Offender Therapy & Comparative Criminology* 2011; **55**(2): 182-206.
60. de Lind van Wijngaarden JW, Schunter BT, Iqbal Q. Sexual abuse, social stigma and HIV vulnerability among young feminised men in Lahore and Karachi, Pakistan. *Culture, Health & Sexuality* 2013; **15**(1): 73-84.
61. Thongpriwan V, McElmurry BJ. Thai female adolescents' perceptions of dating violence. *Health Care for Women International* 2009; **30**(10): 871-91 21p.
62. Pradubmook-Sherer P. Prevalence and correlates of adolescent dating violence in Bangkok, Thailand. *Journal of Sociology and Social Welfare* 2009; **36**(1): 9-37.
63. Wu JL, Wang LH, Zhao GL, Zhang XS. Sexual abuse and reproductive health among unmarried young women seeking abortion in China. *International Journal of Gynecology & Obstetrics* 2006; **92**(2): 186-91.
64. Jejeebhoy SJ, Kalyanwala S, Xavier AJ, Kumar R, Jha N. Experience seeking abortion among unmarried young women in Bihar and Jharkhand, India: delays and disadvantages. *Reprod Health Matters* 2010; **18**(35): 163-74.
65. Kalyanwala S, Jejeebhoy SJ, Xavier AJ, Kumar R. Experiences of unmarried young abortion-seekers in Bihar and Jharkhand, India. *Culture Health & Sexuality* 2012; **14**(3): 241-55.
66. Kalyanwala S, Xavier AJ, Jejeebhoy S, Kumar R. Abortion experiences of unmarried young women in India: evidence from a facility-based study in Bihar and Jharkhand. *International perspectives on sexual & reproductive health* 2010; **36**(2): 62-71.
67. Sutcliffe CG, Aramrattana A, Sherman SG, et al. Incidence of HIV and sexually transmitted infections and risk factors for acquisition among young methamphetamine users in northern Thailand. *Sexually transmitted diseases* 2009; **36**(5): 284-9.
68. Yi S, Poudel KC, Yasuoka J, Palmer PH, Yi S, Jimba M. Role of risk and protective factors in risky sexual behavior among high school students in Cambodia. *BMC Public Health* 2010; **10**: 477.
69. Yip PSF, Zhang H, Lam T-H, et al. Sex knowledge, attitudes, and high-risk sexual behaviors among unmarried youth in Hong Kong. *Bmc Public Health* 2013; **13**.
70. Corner H, Rissel C, Smith B, et al. Sexual health behaviours among Pacific Island youth in Vanuatu, Tonga and the Federated States of Micronesia. *Health Promotion Journal of Australia* 2005; **16**(2): 144-50.
71. Gong J, Saxena V, Mathur A, et al. HIV risk and prevention behaviours, intentions, perceptions and knowledge among youth in Goa, India. *International Journal of STD & AIDS* 2010; **21**(6): 392-9.
72. Mohammad K, Farahani FK, Mohammadi MR, et al. Sexual risk-taking behaviors among boys aged 15-18 years in Tehran. *Journal of Adolescent Health* 2007; **41**(4): 407-14.
73. Ahmadian M, Hamsan HH, Abdullah H, Samah AA, Noor AM. Risky sexual behavior among rural female adolescents in Malaysia: a limited role of protective factors. *Global Journal of Health Science* 2014; **6**(3): 165-74.
74. Viseskul N, Fongkaew W, Settheekul S, Grimes RM. Factors Related to Sexual Self-Efficacy among Thai Youth Living with HIV/AIDS. *J Int Assoc Provid AIDS Care* 2015; **14**(5): 423-7.
75. Potdar R, Mmari K. Factors influencing sexual initiation, multiple partners and condom use among male slum youth in Pune, India. *Global Public Health* 2011; **6**(8): 843-58.
76. Tho le H, Singhasivanon P, Kaewkungwal J, Kaljee LM, Charoenkul C. Sexual behaviors of alcohol drinkers and non-drinkers among adolescents and young adults in Nha Trang, Vietnam. *Southeast Asian Journal of Tropical Medicine & Public Health* 2007; **38**(1): 152-60.

77. Yan H, Li L, Bi Y, Xu X, Maddock JE, Li S. Family and peer influences on sexual behavior among female college students in wuhan, china. *Women & Health* 2010; **50**(8): 767-82 16p.
78. Puria M, Cleland J. Sexual behavior and perceived risk of HIV/AIDS among young migrant factory workers in Nepal. *Journal of Adolescent Health* 2006; **38**(3): 237-46.
79. Sudhinaraset M, Mmari K, Go V, Blum RW. Sexual attitudes, behaviours and acculturation among young migrants in Shanghai. *Cult Health Sex* 2012; **14**(9): 1081-94.
80. Patel SA, Bangorn S, Aramrattana A, et al. Elevated alcohol and sexual risk behaviors among young Thai lesbian/bisexual women. *Drug and Alcohol Dependence* 2013; **127**(1-3): 53-8.
81. Gomez M. Sexual Behavior Among Filipino High School Students Who are Deaf. *Sexuality & Disability* 2011; **29**(4): 301-12 12p.
82. Li J, Li S, Yan H, et al. Early Sex Initiation and Subsequent Unsafe Sexual Behaviors and Sex-Related Risks Among Female Undergraduates in Wuhan, China. *Asia-Pacific Journal of Public Health* 2015; **27**(2 suppl): 21S-9S.
83. Song Y, Ji CY. Sexual intercourse and high-risk sexual behaviours among a national sample of urban adolescents in China. *Journal of Public Health* 2010; **32**(3): 312-21.
84. Huang J, Bova C, Fennie KP, Rogers A, Williams AB. Knowledge, attitudes, behaviors, and perceptions of risk related to HIV/AIDS among Chinese university students in Hunan, China. *AIDS Patient Care & STDs* 2005; **19**(11): 769-77 9p.
85. Thanavanh B, Harun-Or-Rashid M, Kasuya H, Sakamoto J. Knowledge, attitudes and practices regarding HIV/AIDS among male high school students in Lao People's Democratic Republic. *Journal of the International AIDS Society* 2013; **16**: 17387.
86. Ma Q, Ono-Kihara M, Cong L, et al. Behavioral and psychosocial predictors of condom use among university students in Eastern China. *AIDS Care* 2009; **21**(2): 249-59 11p.
87. Tang L, Chen R, Huang D, et al. Prevalence of condom use and associated factors among Chinese female undergraduate students in Wuhan, China. *AIDS Care* 2013; **25**(4): 515-23.
88. Haque MR, Soonthornthada A. Risk perception and condom-use among Thai youths: findings from Kanchanaburi Demographic Surveillance System site in Thailand. *Journal of Health, Population & Nutrition* 2009; **27**(6): 772-83.
89. Chemnasiri T, Netwong T, Visarutratana S, et al. Inconsistent condom use among young men who have sex with men, male sex workers, and transgenders in Thailand. *AIDS Education & Prevention* 2010; **22**(2): 100-9 10p.
90. Rongkavilit C, Naar-King S, Chuenyam T, Wang B, Wright K, Phanuphak P. Health risk behaviors among HIV-infected youth in Bangkok, Thailand. *J Adolesc Health* 2007; **40**(4): 358 e1-8.
91. Douthwaite MR, Saroun L. Sexual behaviour and condom use among unmarried young men in Cambodia. *AIDS Care* 2006; **18**(5): 505-13.
92. Santhya KG, Acharya R, Jejeebhoy SJ. Condom use before marriage and its correlates: evidence from India. *International perspectives on sexual & reproductive health* 2011; **37**(4): 170-80.
93. Perera B, Reece M. Sexual behavior of young adults in Sri Lanka: Implications for HIV prevention. *AIDS Care* 2006; **18**(5): 497-500.
94. Do TH, Le LC, Burgess JA, Bui DS. Determinants of condom use at sexual debut among young Vietnamese. *International Journal of Adolescent Medicine & Health* 2014; **26**(3): 403-10.
95. McMillan K, Worth H. The impact of socio-cultural context on young people's condom use: evidence from two Pacific Island countries. *Cult Health Sex* 2011; **13**(3): 313-26.
96. Khumsaen N, Gary FA. Determinants of actual condom use among adolescents in Thailand. *J Assoc Nurses AIDS Care* 2009; **20**(3): 218-29.
97. McManus A, Dhar L. Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education: (a cross sectional survey of urban adolescent school girls in South Delhi, India). *BMC Women's Health* 2008; **8**: 12-.
98. Yazdi CA, Aschbacher K, Arvantaj A, et al. Knowledge, attitudes and sources of information regarding HIV/AIDS in Iranian adolescents. *AIDS Care* 2006; **18**(8): 1004-10.
99. Mahat G, Pradhan G. HIV/AIDS Knowledge and Self-Efficacy Among Late Adolescents in Nepal. *Research & Theory for Nursing Practice* 2012; **26**(3): 205-.
100. Mahat G, Scoloveno MA. HIV/AIDS knowledge, attitudes and beliefs among Nepalese adolescents. *Journal of Advanced Nursing* 2006; **53**(5): 583-90 8p.
101. Uddin MJ, Choudhury AM. Reproductive health awareness among adolescent girls in rural Bangladesh. *Asia-Pacific Journal of Public Health* 2008; **20**(2): 117-28.
102. Durongritichai V. Knowledge, attitudes, self-awareness, and factors affecting HIV/AIDS prevention among Thai university students. *Southeast Asian J Trop Med Public Health* 2012; **43**(6): 1502-11.
103. Celentano DD, Sirojro B, Sutcliffe CG, et al. Sexually transmitted infections and sexual and substance use correlates among young adults in Chiang Mai, Thailand. *Sexually transmitted diseases* 2008; **35**(4): 400-5.
104. Whitehead SJ, Leelawiwat W, Jeeyapant S, et al. Increase in sexual risk behavior and prevalence of Chlamydia trachomatis among adolescents in Northern Thailand. *Sex Transm Dis* 2008; **35**(10): 883-8.
105. Banerjee SK, Andersen KL, Warvadekar J, Aich P, Rawat A, Upadhyay B. How prepared are young, rural women in India to address their sexual and reproductive health needs? a cross-sectional assessment of youth in Jharkhand. *Reproductive Health* 2015; **12**(1).
106. Sychareun V, Hansana V, Phengsavanh A, Phongsavan K. Awareness and attitudes towards emergency contraceptive pills among young people in the entertainment places, Vientiane City, Lao PDR. *BMC Women's Health* 2013; **13**: 14-.
107. Adhikari R. Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal. *BMC Women's Health* 2009; **9**: 27.
108. Rajapaksa-Hewageegana N, Piercy H, Salway S, Samarage S. Sexual and reproductive knowledge, attitudes and behaviours in a school going population of Sri Lankan adolescents. *Sexual & Reproductive Healthcare* 2015; **6**(1): 3-8.
109. Wong LP. Qualitative inquiry into premarital sexual behaviours and contraceptive use among multiethnic young women: implications for education and future research. *PLoS One* 2012; **7**(12): e51745.
110. Sanga K, Mola G, Wattimena J, Justesen A, Black KI. Unintended pregnancy amongst women attending antenatal clinics at the Port Moresby General Hospital. *Australian & New Zealand Journal of Obstetrics & Gynaecology* 2014; **54**(4): 360-5.
111. Hamjah SH, Samuri MAA, Rasit RM, et al. Factors relating to premarital pregnancy amongst Muslim adolescents in Malaysia. *Research Journal of Medical Sciences* 2012; **6**(6): 266-71.
112. Moni SA, Nair MKC, Devi RS. Pregnancy among unmarried adolescents and young adults. *Journal of Obstetrics and Gynecology of India* 2013; **63**(1): 49-54.
113. Wei W, Yu X. Adverse childhood experience as a risk factor for adolescent pregnancy in China. *International Journal of Child and Adolescent Health* 2013; **6**(3): 323-9.
114. Olsson P, Wijewardena K. Unmarried women's decisions on pregnancy termination: Qualitative interviews in Colombo, Sri Lanka. *Sexual & reproductive healthcare : official journal of the Swedish Association of Midwives* 2010; **1**(4): 135-41.
115. Ahmed MK, Van Ginneken J, Razzaque A. Factors associated with adolescent abortion in a rural area of Bangladesh. *Tropical Medicine and International Health* 2005; **10**(2): 198-205.
116. Kennedy EC, Bulu S, Harris J, Humphreys D, Malverus J, Gray NJ. "These issues aren't talked about at home": a qualitative study of the sexual and reproductive health information preferences of adolescents in Vanuatu. *BMC Public Health* 2014; **14**: 770.

117. Ngo AD, Ross MW, Ratliff EA. Internet influences on sexual practices among young people in Hanoi, Vietnam. *Culture, Health & Sexuality* 2008; **10**: S201-13.
118. Ab Rahman A, Ab Rahman R, Ibrahim MI, et al. Knowledge of sexual and reproductive health among adolescents attending school in Kelantan, Malaysia. *Southeast Asian Journal of Tropical Medicine & Public Health* 2011; **42**(3): 717-25.
119. Zhang L, Li X, Shah IH. Where do Chinese adolescents obtain knowledge of sex? Implications for sex education in China. *Health Education* 2007; **107**(4): 351-63.
120. Guilamo-Ramos V, Soletti AB, Burnette D, Sharma S, Leavitt S, McCarthy K. Parent-Adolescent Communication About Sex in Rural India: U.S.-India Collaboration to Prevent Adolescent HIV. *Qualitative Health Research* 2012; **22**(6): 788-800.
121. Nguyen HN, Liamputtong P, Murphy G. Knowledge of contraceptives and sexually transmitted diseases and contraceptive practices amongst young people in Ho Chi Minh City, Vietnam. *Health Care Women Int* 2006; **27**(5): 399-417.
122. Regmi PR, van Teijlingen E, Simkhada P, Acharya DR. Barriers to sexual health services for young people in Nepal. *Journal of Health, Population & Nutrition* 2010; **28**(6): 619-27.
123. Raman S, Nicholls R, Pitakaka F, Gapiroongo K, Hou L. Identifying and overcoming barriers to adolescent sexual and reproductive health in the Solomon Islands: perspectives and practices of health, education and welfare workers. *Pacific Journal of Reproductive Health* 2015; **1**: 4-13.
124. Kennedy EC, Bulu S, Harris J, Humphreys D, Malverus J, Gray NJ. "Be kind to young people so they feel at home": a qualitative study of adolescents' and service providers' perceptions of youth-friendly sexual and reproductive health services in Vanuatu. *BMC health services research* 2013; **13**: 455.
125. Li N, Boulay M. Individual, familial and extra-familial factors associated with premarital sex among Bangladeshi male adolescents. *Sexual Health* 2010; **7**(4): 471-7.
126. National Institute of Statistics. Cambodia Demographic and Health Survey 2010. Phnom Penh and Calverton: National Institute of Statistics, Directorate General for Health, and ICF Macro, 2011.
127. Xiao Z. Psychosocial Correlates of Premarital Sex Among College Students in Hunan Province, China. *International Journal of Sexual Health* 2012; **24**(4): 318-28 11p.
128. Li S, Chen R, Cao Y, Li J, Zuo D, Yan H. Sexual knowledge, attitudes and practices of female undergraduate students in Wuhan, China: the only-child versus students with siblings. *PLoS One* 2013; **8**(9): e73797.
129. Guo W, Wu Z, Qiu Y, Chen G, Zheng X. The timing of sexual debut among Chinese youth. *International perspectives on sexual & reproductive health* 2012; **38**(4): 196-204.
130. Dongxian Zhang, Yongyi Bi, Maddock JE, Shiyue Li. Sexual and Reproductive Health Knowledge Among Female College Students in Wuhan, China. *Asia-Pacific Journal of Public Health* 2010; **22**(1): 118-26.
131. Mu W, Zhao Y, Khoshnood K, et al. Knowledge and perceptions of sexual and reproductive health and HIV among perinatally HIV-infected adolescents in rural China. *AIDS Care* 2015: 1-6.
132. Cao Y, Xiao H, Yan H, Li J, Li S. Prevalence and Sex-Related Risk Factors of Premarital Pregnancy and Reproductive Tract Infections Among Female Undergraduates in Wuhan, China. *Asia-Pacific Journal of Public Health* 2015; **27**(2): 30S-40S.
133. He H, Blum RW. Prevalence of unintended pregnancy and its associated factors among sexually active never-married youth in Shanghai. *Journal of Paediatrics & Child Health* 2013; **49**(11): 912-8.
134. Tu X, Lou C, Gao E, Li N, Zabin LS. The relationship between sexual behavior and nonsexual risk behaviors among unmarried youth in three Asian cities. *Journal of Adolescent Health* 2012; **50**(3 Suppl): S75-82.
135. Zhang L, Li X, Shah IH, Baldwin W, Stanton B. Parent-adolescent sex communication in China. *European Journal of Contraception & Reproductive Health Care* 2007; **12**(2): 138-47.
136. Ong J, Wong W, Lee A, Holroyd E, Huang SY. Sexual activity and adolescent health risk behaviours amongst high school students in three ethnic Chinese urban populations. *Journal of Clinical Nursing* 2013; **22**(23/24): 3270-9 10p.
137. International Institute for Population Sciences. National Family Health Survey 2005-2006. Mumbai: International Institute for Population Sciences and Macro International, 2007.
138. Das BM, Ray S. Adolescent male reproductive health: Awareness and behavior among peri-urban and rural boys of West Bengal, India. *International Journal of Men's Health* 2007; **6**(2): 79-99.
139. Santhya K, Acharya R, Jejeebhoy SJ, Ram U. Timing of first sex before marriage and its correlates: Evidence from India. *Culture, Health & Sexuality* 2011; **13**(3): 327-41.
140. Mukhopadhyay DK, Mukhopadhyay S, Sinhababu A, Biswas AB. Are the adolescent behaviors too risky? A school-based study in a district of West Bengal, India. *J Trop Pediatr* 2012; **58**(6): 496-500.
141. Ghule M, Balaiah D, Joshi B. Attitude towards premarital sex among rural college youth in Maharashtra, India. *Sexuality & Culture: An Interdisciplinary Quarterly* 2007; **11**(4): 1-17.
142. Char A, Saavala M, Kulmala T. Assessing young unmarried men's access to reproductive health information and services in rural India. *BMC Public Health* 2011; **11**: 476.
143. Alexander M, Garda L, Kanade S, Jejeebhoy S, Ganatra B. Romance and sex: pre-marital partnership formation among young women and men, Pune district, India. *Reproductive Health Matters* 2006; **14**(28): 144-55.
144. Hazarika NC, Mahanta J. Perceptions of unmarried young women regarding family size, sexually transmitted diseases at residential regional institutes in northeastern India. *Southeast Asian Journal of Tropical Medicine & Public Health* 2005; **36**(1): 233-6.
145. Mishra SK, Mukhopadhyay S. Socioeconomic correlates of reproductive morbidity among adolescent girls in Sikkim, India. *Asia-Pacific Journal of Public Health* 2012; **24**(1): 136-50.
146. Juyal R, Kandpal SD, Semwal J. Menstrual hygiene and reproductive morbidity in adolescent girls in Dehradun, India. *Bangladesh Journal of Medical Science* 2014; **13**(2): 170-4.
147. Nair MK, Leena ML, George B, Thankachi Y, Russell PS. ARSH 2: Reproductive and sexual health knowledge, attitude and practices: comparison among boys and girls (10-24 y). *Indian J Pediatr* 2013; **80** Suppl 2: S199-202.
148. Jain R, Muralidhar S, Talwar R. Sexual resilience within intimate relations among unmarried adolescent girls seeking abortion in an abortion clinic of Delhi, India. *Indian Journal of Sexually Transmitted Diseases* 2014; **35**(1): 29-34.
149. Farahani FKA, Cleland J, Mehryar AH. Correlates and Determinants of Reproductive Behavior among Female University Students in Tehran. *Journal of Reproduction & Infertility* 2012; **13**(1): 39-51 13p.
150. Mahdavi P. Passionate uprisings: young people, sexuality and politics in post-revolutionary Iran. *Cult Health Sex* 2007; **9**(5): 445-57.
151. Mohammadi MR, Mohammad K, Farahani FKA, et al. Reproductive knowledge, attitudes and behavior among adolescent males in Tehran, Iran. *International Family Planning Perspectives* 2006; **32**(1): 35-44.
152. Mohtasham G, Shamsaddin N, Bazargan M, Anoshervan K, Elaheh M, Fazlollah G. Correlates of the intention to remain sexually inactive among male adolescents in an Islamic country: case of the Republic of Iran. *Journal of School Health* 2009; **79**(3): 123-9 7p.
153. Malek A, Shafiee-Kandjani AR, Safaiyan A, Abbasi-Shokoochi H. Sexual Knowledge among High School Students in Northwestern Iran. *ISRN Pediatrics* 2012: 1-5.
154. Hedayati-Moghaddam MR, Eftekharzadeh-Mashhadi I, Fathimoghaddam F, Pourafzali SJ. Sexual and reproductive behaviors among undergraduate university students in Mashhad, a city in northeast of Iran. *Journal of Reproduction and Infertility* 2015; **16**(1): 43-8.

155. Farahani FKA, Shah I, Cleland J, Mohammadi MR. Adolescent Males and Young Females in Tehran: Differing Perspectives, Behaviors and Needs for Reproductive Health and Implications for Gender Sensitive Interventions. *Journal of Reproduction & Infertility* 2012; **13**(2): 101-10 10p.
156. Sychareun V, Faxelid E, Thomsen S, Somphet V, Popenoe R. Customary adolescent sexual practices among the Akha of northern Lao PDR: considerations for public health. *Culture, Health & Sexuality* 2011; **13** Suppl 2: S249-62.
157. Sychareun V, Thomsen S, Chaleunvong K, Faxelid E. Risk perceptions of STIs/HIV and sexual risk behaviours among sexually experienced adolescents in the Northern part of Lao PDR. *BMC Public Health* 2013; **13**(1): 1126-.
158. Sychareun V, Phengsavanh A, Hansana V, et al. Predictors of premarital sexual activity among unmarried youth in Vientiane, Lao PDR: the role of parent-youth interactions and peer influence. *Global Public Health* 2013; **8**(8): 958-75.
159. Anwar M, Sulaiman SA, Ahmadi K, Khan TM. Awareness of school students on sexually transmitted infections (STIs) and their sexual behavior: a cross-sectional study conducted in Pulau Pinang, Malaysia. *BMC Public Health* 2010; **10**: 47-.
160. Lee LK, Chen PC, Lee KK, Kaur J. Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey. *Singapore Med J* 2006; **47**(6): 476-81.
161. Ng CJ, Kamal SF. Bridging the gap between adolescent sexuality and HIV risk: the urban Malaysian perspective. *Singapore Med J* 2006; **47**(6): 482-90.
162. Economic Policy Planning and Statistics Office. Republic of the Marshall Islands Demographic and Health Survey 2007. Noumea: Economic Policy Planning and Statistics Office and SPC, 2007.
163. Suzuki K, Motohashi Y, Kaneko Y. Factors associated with the reproductive health risk behavior of high school students in the Republic of the Marshall Islands. *Journal of School Health* 2006; **76**(4): 138-44.
164. Hla Soe T, Phyto Maung T, Yin Thet Nu O, Ko Ko Z, Than Tun S, Thein T. Sexual and reproductive health needs of vulnerable youth in Myanmar. *Southeast Asian Journal of Tropical Medicine & Public Health* 2008; **39**(6): 1126-38.
165. Ministry of Health and Population. Nepal Demographic and Health Survey 2011. Kathmandu: Ministry of Health and Population, New ERA, ICF International, 2012.
166. Jaiswal S, Magar BS, Thakali K, Pradhan A, Gurubacharya DL. HIV/AIDS and STI related knowledge, attitude and practice among high school students in Kathmandu valley. *Kathmandu University Medical Journal* 2005; **3**(1): 69-75.
167. Andersen KL, Khanal RC, Teixeira A, et al. Marital status and abortion among young women in Rupandehi, Nepal. *BMC Women's Health* 2015; **15**(1).
168. Adhikari R. Are Nepali students at risk of HIV? A cross-sectional study of condom use at first sexual intercourse among college students in Kathmandu. *Journal of the International AIDS Society* 2010; **13**: 7.
169. Shaikh BT, Rahim ST. Assessing knowledge, exploring needs: a reproductive health survey of adolescents and young adults in Pakistan. *European Journal of Contraception & Reproductive Health Care* 2006; **11**(2): 132-7.
170. National Statistics Office Philippines. Philippines National Demographic and Health Survey 2013. Calverton, Maryland: National Statistics Office Philippines and ICF Macro, 2014.
171. National Statistics Office. Solomon Islands Demographic and Health Survey 2006-2007. Noumea: National Statistics Office, SPC and Macro International Inc, 2007.
172. Raman SN, R., Pitakaka F, Gaporongo K, Hou L. Identifying and overcoming barriers to adolescent sexual and reproductive health in the Solomon Islands: perspectives and practices of health, education and welfare workers. *Pacific Journal of Reproductive Health* 2015; **1**: 4-13.
173. Powwattana A. Sexual behavior model among young Thai women living in slums in Bangkok, Thailand. *Asia-Pacific Journal of Public Health* 2009; **21**(4): 451-60.
174. Rasamimari A, Dancy B, Talashek M, Park CG. Predictors of Sexual Behaviors Among Thai Young Adults. *Journal of the Association of Nurses in AIDS Care* 2007; **18**(6): 13-21.
175. Rasamimari A, Dancy B, Smith J. HIV risk behaviours and situations as perceived by Thai adolescent daughters and their mothers in Bangkok, Thailand. *AIDS Care* 2008; **20**(2): 181-7 7p.
176. Supametaporn P, Stern PN, Rodcumdee B, Chaiyawat W. Waiting for the right time: how and why young Thai women manage to avoid heterosexual intercourse. *Health Care for Women International* 2010; **31**(8): 737-54.
177. Lee B, Oberdorfer P. Risk-taking behaviors among vertically HIV-infected adolescents in northern Thailand. *J Int Assoc Physicians AIDS Care (Chic)* 2009; **8**(4): 221-8.
178. Wongpanarak N, Fongkaew W, Sethabouppha H, Marcus MT, Rujkorakarn D. Early adolescent Thais' perceptions of sexual identity. *Pacific Rim International Journal of Nursing Research* 2010; **14**(2): 122-36.
179. Vanuati National Statistics Office. Vanuatu Demographic and Health Survey 2013. Noumea: Vanuati National Statistics Office, SPC, 2014.
180. General Statistics Office. Viet Nam Multiple Indicator Cluster Survey 2011. Final report. Ha Noi: General Statistics Office, Viet Nam, 2012.
181. Bui TC, Markham CM, Ross MW, et al. Perceived gender inequality, sexual communication self-efficacy, and sexual behaviour among female undergraduate students in the Mekong Delta of Vietnam. *Sex Health* 2012; **9**(4): 314-22.
182. Kaljee L, Green M, Riel R, Lerdboon P, Tho L, Thoa L. Sexual stigma, sexual behaviors, and abstinence among vietnamese adolescents: implications for risk and protective behaviors for HIV, STIs, and unwanted pregnancy. *J Assoc Nurses AIDS Care* 2007; **18**: 48 - 59.
183. Doskoch P. Parent-Child Discussions About Sexuality Are Uncommon in Vietnam. *International Perspectives on Sexual & Reproductive Health* 2011; **37**(2): 103-4 2p.
184. IHME. Global educational attainment 1970-2015. Seattle, United States: Institute for Health Metrics and Evaluation, 2015.
185. UNESCO. UNESCO Institute for Statistics: education data. <http://www.uis.unesco.org/Education/Pages/default.aspx> (accessed 01/06/2015).
186. Bearinger LH, Sieving RE, Ferguson J, Sharma V. Global perspectives on the sexual and reproductive health of adolescents: patterns, prevention, and potential. *Lancet* 2007; **369**(9568): 1220-31.
187. Schunter BT, Cheng WS, Kendall M, Marais H. Lessons learned from a review of interventions for adolescent and young key populations in Asia Pacific and opportunities for programming. *Journal of acquired immune deficiency syndromes* 2014; **66** Suppl 2: S186-92.
188. Mavedzenge SN, Luecke E, Ross DA. Effective approaches for programming to reduce adolescent vulnerability to HIV infection, HIV risk, and HIV-related morbidity and mortality: a systematic review of systematic reviews. *Journal of acquired immune deficiency syndromes* 2014; **66** Suppl 2: S154-69.
189. Haberland N, Rogow D. Sexuality education: emerging trends in evidence and practice. *J Adolesc Health* 2015; **56**(1 Suppl): S15-21.
190. Svanemyr J, Amin A, Robles OJ, Greene ME. Creating an enabling environment for adolescent sexual and reproductive health: a framework and promising approaches. *J Adolesc Health* 2015; **56**(1 Suppl): S7-14.
191. Denno DM, Hoopes AJ, Chandra-Mouli V. Effective strategies to provide adolescent sexual and reproductive health services and to increase demand and community support. *J Adolesc Health* 2015; **56**(1 Suppl): S22-41.

APPENDIX 1: METHODS

Plan and methodology

Background

Currently, there are estimated to be 831 million unmarried young people aged between 10-24 years in the Asia Pacific Region. Despite making up a significant portion of the population, very little systematic information is readily available with regards to their sexual behavior. The majority of national data available with regards to sexual activity, behavior, and attitudes, is currently focused on married young people, and although several studies have been conducted within individual countries or reported on as part of national or regional information sources, there remain significant knowledge gaps. The increasing number of smaller, sub-national studies that do include unmarried young people, as well as data included in government and non-government reports, provides an opportunity to consolidate this information to inform a coherent research agenda and identify important issues for this population.

This review presents an important opportunity to expand on the most recently submitted 2015 review for the Asia and the Pacific and support accelerated action for unmarried young people's SRH in the region.

Aim

To identify the existing literature related to unmarried young people's (10-24 years) sexual behavior in Asia and the Pacific, describe the current status of unmarried young people's knowledge, practices, attitudes, and SRH outcomes, and highlight key knowledge and research gaps.

Objectives

- Identify and describe the nature and scope of regional, national and sub-national studies published in peer-reviewed or grey literature describing knowledge, attitudes, behaviours and outcomes related to SRH among unmarried young people in Asia and the Pacific
- Synthesise available evidence on knowledge, attitudes, behaviours and outcomes related to SRH among unmarried young people for each country
- Identify significant knowledge gaps and provide recommendations for how these might be addressed

The review will include available literature for in- and out-of-school unmarried young people and diverse geographical settings, and will also consider populations with specific needs such as young key populations, urban poor, migrants, displaced young people, young people living with disability, and ethnic minorities, where appropriate.

Approach

1. Research questions

The research questions and definitions are provided in Table 2.

Table 2. Research questions

Question	Definitions
What are the sexual behaviours and practices of unmarried young people aged 10-24 years in Asia and the Pacific?	Behaviours and practices include: <ul style="list-style-type: none"> • Dating relationships • Premarital sexual activity • Higher risk sex / unsafe sex <ul style="list-style-type: none"> ○ Multiple partners ○ Sex before 15 years ○ Transactional sex • Use of condoms and contraceptives • Sexual violence and coercion
What are unmarried young people's knowledge and attitudes related to sexual behaviour and sexual and reproductive health?	Includes attitudes related to: <ul style="list-style-type: none"> • Dating and premarital behaviour • Gender norms, gender identity, sexuality and sexual orientation • Power dynamics within relationships and sexual coercion • Condoms and contraceptives Knowledge related to: <ul style="list-style-type: none"> • Reproduction • Consequences of unsafe sex including pregnancy, sexually transmitted infections and HIV • Condoms and contraception
What are sexual and reproductive health outcomes for unmarried young people?	Outcomes of interest include: <ul style="list-style-type: none"> • Unintended pregnancy • Abortion, including unsafe abortion • Sexually transmitted infections • Sexually transmitted HIV
What are the important determinants of unmarried young people's sexual behaviour and sexual and reproductive health outcomes?	Determinants of interest include: <ul style="list-style-type: none"> • Education • Socioeconomic status • Use of alcohol and other drugs • Socio-cultural and gender norms and attitudes • Stigma and discrimination • Media / Internet / social media / pornography

2. Identifying relevant studies

Inclusion criteria:

- Published in English language
- Published between January 2005 – October 2015
- Human subjects
- Population aged 10-24 primary focus, or includes age-disaggregated data for 10-24 year olds (10-14 and/or 15-19 and/or 20-24)
- Unmarried young people primary focus, or includes data disaggregated by marital status
- Primary descriptive or exploratory study (qualitative, quantitative or mixed-methods) that includes primary data related to the research questions
- Conducted in Asia or the Pacific (defined as Oceania), primarily focused on (or reporting data for) the following countries: Afghanistan, Bhutan, Bangladesh, Cambodia, China, Cook Islands, DPR Korea, Federated States of Micronesia, Fiji, India, Indonesia, Iran, Kiribati, Lao PDR, Malaysia, Myanmar, Mongolia, Maldives, Marshall Islands, Nauru, Nepal, Niue, Palau, Pakistan, Papua New Guinea, Philippines, Samoa, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tokelau, Tonga, Tuvalu, Vanuatu or Viet Nam

Exclusion criteria:

- Review article (systematic reviews, meta-analyses, scoping reviews, narrative reviews)
- Studies or reports of interventions only
- Studies or guidelines of clinical interventions / efficacy
- Non-original research (opinion pieces, commentaries, editorial review, book review)
- Studies not reporting age-disaggregated data or data for unmarried young people 10-24 years
- Studies not focused on countries listed above. High income Asia Pacific countries will not be included (Singapore, Brunei, Japan, Republic of Korea, Australia, New Zealand)

Databases:

The following electronic databases will be searched: BIDS:IBSS, BIDS: Ingenta, PsycInfo via Ovid, PubMed (NLM), CINAHL via Ovid, Ovid journals, Ovid Medline, Books via Ovid, Web of Science, EMBASE via Ovid, Science Direct, Cochrane Reviews, Thomson Reuters and Anthropology plus.

In addition, peer-reviewed articles published in journals such as (but not exclusively in) Culture, Health and Sexuality, Reproductive Health Matters, Sociology of Health and Illness, Lancet, BMJ, Archives of Sexual Behavior, AIDS Care, Social Science and Medicine, Pacific Health Dialogue, and the Pacific Journal of Reproductive Health will also be reviewed. References lists of included articles will also be searched.

Search strategy:

Drawing on the UNFPA Framework for Action on Adolescents and Youth and Reproductive Rights and Sexual and Reproductive Health framework, a systematic search strategy will be developed. Suggest search terms include (but not limited to): (youth OR adolescen* OR young adult OR teen*) AND (unmarried OR non-married OR single OR premarital OR non-marital OR never married) AND (Asia OR Oceania OR Afghanistan OR Bangladesh OR Bhutan OR Cambodia OR China OR Democratic People's Republic of Korea OR India OR Indonesia OR Iran OR Lao PDR OR Laos OR Malaysia OR Maldives OR Mongolia OR Myanmar OR Burma OR Nepal OR Pakistan OR Papua New Guinea OR Philippines OR Sri Lanka OR Thailand OR Timor- Leste OR Viet Nam OR Cook Islands OR Fiji OR Federated States of Micronesia OR Kiribati OR Marshall Islands OR Nauru OR Niue OR Palau OR Samoa OR Solomon Islands OR Tokelau OR Tonga OR Vanuatu) AND (induced abortion OR contraception OR family planning OR HIV OR intimate partner violence OR unintended pregnancy OR premarital sex OR sexual behavior OR sexual health OR reproductive health OR sexually transmitted infection OR condom utilization OR sexual violence OR dating OR media OR communication media OR pornography OR gender OR sexual orientation)

3. Study selection

Titles and abstracts will be initially screened to determine eligibility based on the criteria defined above. For example, studies that focus on a target population that does not include unmarried young people, is not carried out in an eligible country, or focuses on a clinical intervention will be removed. Where there is uncertainty about eligibility, the title will be reviewed by a second reviewer. Full text articles will then be obtained and assessed against the eligibility criteria and data from included studies extracted as below.

4. Data extraction

Citations will be imported into Endnote and duplicates deleted. For each relevant full text article data will be extracted into a purpose-built Excel spread sheet, and will include:

- Author
- Year
- Title
- Topic of study
- Type of study
- Quality appraisal
- Country (or countries) included
- Target population (age, sex, sexual orientation)
- Setting (urban, rural, school, community)
- Findings (brief summary)

5. Quality appraisal

Quality appraisal will be conducted of all included full texts using a quality appraisal tool adapted from the *Critical Appraisal Skills Programme (CASP) Qualitative Checklist*¹² and the *Effective Public Health Practice Project Quality Assessment Tool for Quantitative Studies*.¹³

Assessment:

High quality = no '0' scores

Medium quality = one '0' score

Low quality = two or more '0' scores

QUANTITATIVE STUDIES

Adapted from EPHPP

Sampling

Is the sample representative of the target population (ie probability sampling used)

1 = yes

0 = no / unclear

Response rate

What percentage of selected individuals agreed to participate?

1 = $\geq 80\%$ response rate

0 = $< 80\%$ response rate or unclear / not reported

Subjects

Are the characteristics of the subjects adequately described (ie age, sex, SES, education, etc)?

1 = yes

0 = no / unclear

Definition of outcomes

Were the outcomes of interest clearly defined?

1 = yes

0 = no / unclear

Measurement of outcomes

Were outcomes measured using valid and reliable tools?

1 = yes (objective measures, validated tools, well-defined)

0 = no (subjective / not well-defined) or unclear

Statistical analysis

Was the analysis appropriate for the study design (and included measures of uncertainty such as p-values, confidence intervals, etc)?

1 = yes

0 = no / unclear

Confounding

Were relevant confounders (eg age, sex, SES, education, etc) controlled for (either in the design or analysis)?

1 = yes

0 = no / unclear

QUALITATIVE STUDIES

Adapted from CASP

Research aims

Were the research aims / questions clearly stated?

1 = yes

0 = no / unclear

Methodology

Is the qualitative methodology appropriate to address the research question?

1 = yes

0 = no / unclear

Design

Is the research design appropriate to address the research question (has the design been justified by the researcher)?

1 = yes

0 = no / unclear

Recruitment

Did the researcher explain how participants were selected, was this appropriate?

1 = yes

0 = no / unclear

Data collection

Were the data collection methods clearly described and justified (including tools used, how information was gathered (tape, notes, etc), was saturation reached)?

1 = yes

0 = no / unclear

Relationship between researcher and participants

Was the relationship between the researcher(s) and participants considered, including potential for bias / influence?

1 = yes

0 = no / unclear

Ethics

Have ethical issues been considered?

1 = yes

0 = no / unclear

Data analysis

Was there in-depth discussion of the analysis process (including how codes and themes were derived, if applicable), were contradictory data taken into account?

1 = yes

0 = no / unclear

Findings

Are the findings clearly stated with adequate discussion of credibility (triangulation, validity, analysis by more than one researcher, etc)?

1 = yes

0 = no / unclear

Value

Does the researcher discuss the contribution of the study to existing knowledge, consider policy or practice relevance, consider how applicable findings might be to other populations?

1 = yes

0 = no / unclear

APPENDIX 2: DATA EXTRACTION TABLE

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Zuo, X.	2012	Gender differences in adolescent premarital sexual permissiveness in three Asian cities: effects of gender-role attitudes	Knowledge and attitudes	Premarital sex	Cross-sectional	Asia	Female and male	15-24	Viet Nam and China	Urban and rural	Community	High	Male respondents in each city held more permissive attitudes toward premarital sex than did females, with both boys and girls expressing greater permissiveness to male premarital sexual behaviours. Adolescents' gender-role attitudes and permissiveness to premarital sex varied considerably across the three cities, with the Vietnamese the most traditional, the Taiwanese the least traditional, and the adolescents in Shanghai in the middle. A negative association between traditional gender roles and PSP was only found among girls in Shanghai and Taipei. In Shanghai, female respondents who held more traditional gender-role attitudes were more likely to exercise a double standard with respect to male as opposed to female premarital sex (odds ratio [OR] = 1.18).
Tu, X.	2012	The relationship between sexual behavior and nonsexual risk behaviors among unmarried youth in three Asian cities	Sexual behaviour	Premarital sex	Cross-sectional	Asia	Female and male	15-24	Viet Nam and China	Urban	Community	High	Sexual behaviour was associated with seven nonsexual risk behaviours, especially with smoking, drinking, drug use, and running away from home. In terms of the age at initiation of risk behaviours, smoking and drinking were usually initiated before sexual intercourse. Sexual behaviour and nonsexual risk behaviours co-occurred in the high-risk group in all three cities. Youth having the highest risk of sexual behaviour were more likely to have the highest risk of nearly all nonsexual risk behaviours, with the exception of fighting in Hanoi and gambling in Shanghai and Taipei.
Ahmed, M. K.	2005	Factors associated with adolescent abortion in a rural area of Bangladesh	SRH outcomes	Abortion	Cross-sectional	Bangladesh	Female	<20		Rural	Community	Medium	The incidence of abortion was 35 times higher for unmarried than for married adolescents. The chance of an abortion increased with maternal education, and there was a negative relationship between maternal age and abortion. For married and unmarried adolescents, 43% of all abortions were conducted by health workers and 57% by traditional providers.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Uddin, M.	2008	Reproductive Health Awareness Among Adolescent Girls in Rural Bangladesh	Knowledge and attitudes	HIV	Cross-sectional	Bangladesh	Female	10-19		Rural	Community	High	Only 20% of girls had heard about STDs, and 69% of them had incorrect knowledge about the routes of transmission. Sixty per cent of the girls had not ever heard about AIDS, and 48% had not heard about the routes of transmission of HIV/AIDS. Forty-eight per cent believed that prevention of HIV/AIDS is not possible. Age, education either of adolescents or their mothers, residence, and exposure to mass media were the significant predictors of adolescent girls' knowledge about reproductive health.
Li, N.	2010	Individual, familial and extra-familial factors associated with premarital sex among Bangladeshi male adolescents	Sexual behaviour	Premarital sex	Cross-sectional	Bangladesh	Male	15-19		Urban and rural	Community	Medium	12.8% reported ever having had sex. Multivariate analyses demonstrated that, in terms of the self system, having plans to study in the future were associated with a lower risk of engaging in premarital sex (odds ratio (OR) = 0.38; 95% confidence interval (CI) = 0.25-0.59) while knowledge of reproductive health and life skills did not have a strong influence. Strong influences of both familial and extra-familial system were observed. Respect for parents' values and beliefs about sex was associated with decreased odds of premarital sex (OR = 0.39; 95% CI = 0.26-0.59). 'Ever talked with friends about sex-related issues' was associated with threefold increased odds and an increase in peer influence score was associated with increased odds of premarital sex.
van Reeuwijk, M.	2013	The importance of a positive approach to sexuality in sexual health programmes for unmarried adolescents in Bangladesh	Knowledge and attitudes	Sexuality / gender	Qualitative	Bangladesh	Female and male	12-18		Urban	Venue	Medium	Curiosity of boys and girls about sex was driven by a need and desire to know and understand, but also because it was exciting to read about and talk about sex. Young people are not just passive recipients of adult norms and messages around sexuality, but agents who actively construe meanings and navigate between what is expected from them and what they want, need and feel themselves.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Alam, N.	2010	Sexually harassing behavior against adolescent girls in rural Bangladesh: implications for achieving millennium development goals	Sexual behaviour	Violence and/or coercion	Cross-sectional	Bangladesh	Female	13-19		Rural	Community	Medium	Results reveal that gendered harassments were experienced by 35% of the girls, unwanted sexual attentions by 34%, and sexual intimidations by 14%, yielding prevalence of sexual harassments of any type 43%. Higher girls' education and household economic status heightened their risks of being harassed. Perpetrators were male young spoilt bullies (64%), neighbourhood youths (30%), students (22%) and hoodlums (6%). NOTE: "male young spoilt bullies" may potentially have been poorly translated.
Douthwaite, M. R.	2006	Sexual behaviour and condom use among unmarried young men in Cambodia	Sexual behaviour	Condoms	Cross-sectional	Cambodia	Male	15-24	Urban slum / economically disadvantaged	Urban	Community	High	One-third of respondents reported intercourse and half had had sex by the time they were 23. Of these, 39% had given money or gifts in exchange for sex. Transactional sex often occurred in the company of other males, and condom use was higher among those males compared with those who were alone. Of all sexually active respondents, half reported three or more partners, and 71% used a condom at last sex. Regression results showed that condom use varied by type of partner, was less likely among males outside the education system, and higher among those more positive and informed about condoms.
Yi, S.	2010	Role of risk and protective factors in risky sexual behavior among high school students in Cambodia	Sexual behaviour	Higher risk sex	Cross-sectional	Cambodia	Female and male	14-20		Urban	School / college / university	High	12.7% reported sexual intercourse during the past three months. Out of those sexually active students, 34.6% reported having two or more sex partners over the same period, and 52.6% did not use a condom during their last sexual intercourse. After controlling for other covariates, a higher likelihood of risky sexual behaviour remained significantly associated among male participants with higher levels of substance use, higher levels of peer delinquency, and higher family income. Among female participants, a higher likelihood of risky sexual behaviour remained significantly associated with higher levels of substance use, higher levels of community-violence witnessing, and lower levels of family support.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Lopez, J. R.	2015	Characteristics of youth sexual and reproductive health and risky behaviors in two rural provinces of Cambodia	Sexual behaviour	Higher risk sex	Cross-sectional	Cambodia	Female and male	10-24		Rural	Community	Medium	A majority (90 %) stated that a boy or girl should defer sex till marriage. A majority of youths (92 %) also reported that they may or definitely will seek sexual and reproductive health services in the future. About 5.4 % of youth had a prior sexual experience. Only 6.7 % of youth reported having they travelled to a local health centre, hospital or clinic to seek healthcare for a reproductive health problem. Overall, 27 % reported alcohol use in prior 30 days. Relative to girls, boys were more likely to report alcohol use, going out late at night with friends, gambling, pornography use, gambling, and practicing risky behaviours with peers. Living with both parents and current school enrolment, had limited impact on rural youth's individual and social behaviours.
Huang, J.	2005	Knowledge, attitudes, behaviors, and perceptions of risk related to HIV/AIDS among Chinese university students in Hunan, China	Sexual behaviour	Condoms	Cross-sectional	China	Female and male	17-28		Urban	School / college / university	Low	14% of respondents were sexually active and risk behaviours tended to increase with age. Additionally, 24% of the undergraduate students considered themselves to be at moderate to very high risk of contracting HIV and 40% of sexually active students never used condoms.
Ma, Q.	2009	Behavioral and psychosocial predictors of condom use among university students in Eastern China	Sexual behaviour	Condoms	Cross-sectional	China	Female and male	16-20+ (mean 21)		Urban	School / college / university	Medium	Frequent (always/often) condom use during the previous year was reported by only about 40% of both men and women. Multivariate analysis revealed that condom use during the first sexual experience, oral contraceptive use in the previous year and higher condom self-efficacy score in both genders were potent predictors of frequent condom use, while frequent condom use was less likely practiced by men who ever had non-vaginal sex, by those with higher risk-awareness for pregnancy/HIV/sexually transmitted diseases and by women with lower scores for perceived condom benefits.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Tang, L.	2013	Prevalence of condom use and associated factors among Chinese female undergraduate students in Wuhan, China	Sexual behaviour	Condoms	Cross-sectional	China	Female	16-27		Urban	School / college / university	High	Of 4769 female students, 863 (18.1%) reported ever having sexual intercourse. Of these, 19.8% used a condom in their first sexual encounter, and these students were more likely to age 20 or older at first intercourse, and less likely to live in countryside during middle school period, and majoring in the arts. Fully 30% of those having intercourse reported never or seldom or sometimes using condoms in the past 12 months. Students using condoms consistently in the past 12 months were more likely majoring in science and technology, to believe that condoms are the safest way to prevent STD and unwanted pregnancy, and to have used a condom at first intercourse; they were less likely to live in countryside during middle school period, and to report multiple sexual partners since initiating sexual behaviour.
Yan, H.	2009	Multiple sex partner behavior in female undergraduate students in China: a multi-campus survey	Sexual behaviour	Higher risk sex	Cross-sectional	China	Female	16-27		Urban	School / college / university	Low	18.10% reported ever having sexual intercourse, and 5.31% reported having multiple sex partners (29.32% of all women having sexual intercourse). Several demographic, family, peer and work influences, and student factors (including major, performance, knowledge, and attitude toward sex) were risk factors for ever having sex. However, risk factors for multiple sex partners only included working in a place of entertainment, having current close friends that were living with boyfriends, poor academic performance, and positive attitudes toward multiple partners. These women also were more likely to practice masturbation, start having sex at a younger age, have sex with married men and/or men not their "boyfriends" at first coitus, and not use condoms consistently.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Song, Y.	2010	Sexual intercourse and high-risk sexual behaviours among a national sample of urban adolescents in China	Sexual behaviour	Higher risk sex	Cross-sectional	China	Female and male	14-24		Urban	School / college / university	Medium	3% of females and 7% of males reported ever having had sex. Of those who had ever had sex, 41% of females and 30% of males reported forced sex. 52% of females reported condom use compared with 49% of males. 27% of females and 23% of males had experienced a pregnancy. School type and socioeconomic status were found to be independently associated with sexual intercourse and forced sex for high school students. For college students, educational level, school type, family structure, maternal education and socioeconomic status were independently associated with high-risk sexual behaviours.
Sudhinaraset, M.	2012	Sexual attitudes, behaviours and acculturation among young migrants in Shanghai	Sexual behaviour	Higher risk sex	Qualitative	China	Female and male	18-24	Migrants	Urban	Venue	High	Factors associated with increased sexual-risk behaviours include acculturative stress, discrimination leading to social isolation, conflicts between traditional and modern city values and increased sexual opportunities. Premarital sex, cohabitation, unprotected sex and visiting sex workers are common among this population. Reasons for not using condoms included being unprepared, lack of knowledge and barriers in accessing reproductive services due to not having urban documentation.
Yip, P.	2013	Sex knowledge, attitudes, and high-risk sexual behaviors among unmarried youth in Hong Kong	Sexual behaviour	Higher risk sex	Cross-sectional	China	Female and male	18-27		Urban	Community	Medium	The majority of unmarried youth (63.8%) held liberal attitudes toward premarital sex and about half held liberal attitudes toward any form of sexual activity and premarital pregnancy. Around 60% held conservative attitudes toward causal sex relationships and multiple sex partners. Males tended to hold more liberal attitudes toward high-risk sex behaviours than female youth. Approximately 41.5% of unmarried youth reported having engaged in premarital sex, whereas less than 10% engaged in high-risk sexual behaviours. Males also reported higher amounts of premarital sex, casual sex relationships, and multiple sex partners. Females reported higher levels of sexual coercion. Logistic regressions indicated that being older, coming from a divorced family, out of school status and liberal attitudes toward risky sex

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													behaviour were more likely to engage in premarital sex or high-risk sex behaviours, and being female, being better educated and being immigrants were less likely to engage in premarital sex. However, being immigrants was more likely to engage in casual relationship and to have multiple partners.
Li, J.	2015	Early Sex Initiation and Subsequent Unsafe Sexual Behaviors and Sex-Related Risks Among Female Undergraduates in Wuhan, China	Sexual behaviour	Higher risk sex	Cross-sectional	China	Female	Mean 20		Urban	School / college / university	Medium	18.1% reported ever having sexual intercourse. The mean age of sexual debut was 19.3 (± 1.7) years. Females initiating sex earlier were more likely to have first sex with men who were not their boyfriends and less likely to take contraception, to use a condom at first encounter, to use contraception consistently in past year, and/or to use condom consistently during the course of a sexual intercourse. They were more likely to have multiple lifetime and concurrent sexual partners, to report pregnancy, and be diagnosed with sexually transmitted diseases.
Zhang, L.	2007	Where do Chinese adolescents obtain knowledge of sex? Implications for sex education in China	Knowledge and attitudes	Information and services	Cross-sectional	China	Female and male	15-19		Urban	Community	High	Schoolteachers and mass media were identified as the two most important sources of sex knowledge. Adolescents obtained knowledge on topics with less taboo (e.g. puberty) from teachers and obtained knowledge on topics with more taboo (e.g. sexuality, STI/HIV/AIDS) from mass media. However, this differs by having been sexually experienced or not. Parents were the primary source for sex knowledge on less taboo subjects. Doctors were the primary source for STI/HIV/AIDS knowledge. Sexually active adolescents obtained sex knowledge mainly from peers or mass media, while those adolescents who were not sexually experienced identified teachers and parents as the main sources of sex knowledge.
Wu, J. L.	2006	Sexual abuse and reproductive health among unmarried young women seeking abortion in China	SRH outcomes	Multiple topics	Cross-sectional	China	Female	14-24		Urban	Health facility	Medium	14% of participants had experienced sexual violence and 43.4% were diagnosed with STD. Among victims of sexual abuse, 8.6% had their first sexual encounter when they were younger than 18 years; 42.7% had had 2 or more sexual partners; and 21.6% never used contraception.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													Multivariate analysis revealed that sexual abuse, multiple sexual partners, sexual activity before the age of 18 years, and not using contraception were important indicators of the presence of STD.
Dongxian Zhang	2010	Sexual and Reproductive Health Knowledge Among Female College Students in Wuhan, China	Knowledge and attitudes	Multiple topics	Cross-sectional	China	Female	16-27		Urban	School / college / university	Medium	The average score on the knowledge scale was 42.6 out of 100. Knowledge scores were statistically significant ($P < 0.01$) between different sociodemographic factors. Multilinear stepwise regression showed that 11 of 16 factors, including age, grade, major, menarche age, family residence, being the only child, and mother's occupation were significantly related to knowledge
Chi, X.	2012	Prevalence and correlates of sexual behaviors among university students: a study in Hefei, China.	Sexual behaviour	Multiple topics	Cross-sectional	China	Female and male	18-25		Urban and rural	School / college / university	High	12.6% (15.4% of male versus 8.6% of female) students reported having premarital heterosexual intercourse; 10.8% (10.5% of males versus 11.2% of females) had oral sex; 2.7% (3.4% of males versus 1.7% of females) reported same-sex activities; 46% (70.3% of males versus 10.8% of females) reported masturbation behaviours; 57.4% (86.2% of males versus 15.6% of females) students viewed pornography. In terms of sexual communication about sexual knowledge acquisition, 13.7% (10.7% of males versus 18% of females) talked to their parents about sex; 7.1% (6.1% of males versus 8.4% of females) students reported having conversation with parents on contraception. About forcing sexual behaviour, 2.7% (4% of males versus 0.9% of females) reported forcing their sexual partners to have sex, and 1.9% (2.4% of males versus 1.2% of females) reported being forced to have sex.
Mu, W.	2015	Knowledge and perceptions of sexual and reproductive health and HIV among perinatally HIV-infected adolescents in rural China	Knowledge and attitudes	Multiple topics	Cross-sectional	China	Female and male	10-19	Living with HIV	Rural	Health facility	Low	79% had never discussed puberty development or sexuality with parents. Over 50% had never heard of condoms and 20% reported not having any informational source of SRH and HIV knowledge. Only 5% correctly answered all questions regarding HIV knowledge and pregnancy, with 18% correctly answered questions regarding contraception. Adolescents older than age of 15 and who had been disclosed of HIV status were more likely to

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													acquire correct knowledge of SRH and HIV.
Cao, Y.	2015	Prevalence and Sex-Related Risk Factors of Premarital Pregnancy and Reproductive Tract Infections Among Female Undergraduates in Wuhan, China	SRH outcomes	Multiple topics	Cross-sectional	China	Female	16-27		Urban	School / college / university	Medium	Of the 4,769 females, 863 (18.1%) reported ever having sexual intercourse, 17.5% of which had become pregnant, and 22.7% had contracted RTIs. Younger age or not using a condom at first sex and having multiple sex partners contributed to premarital pregnancy. Majoring in arts, being from less-developed regions of China, having multiple partners, and self-reported pregnancy contributed to RTIs.
Lam, C. B.	2007	The use of cyberpornography by young men in Hong Kong: some psychosocial correlates	Sexual behaviour	Pornography	Cross-sectional	China	Male	18-25		Urban	School / college / university	Low	Results showed that online pornography viewing was common and was strongly associated with peer influence and susceptibility to peer pressure. Moreover, participants who reported to have more online pornography viewing were found to score higher on measures of premarital sexual permissiveness and proclivities toward sexual harassment.
He, H.	2013	Prevalence of unintended pregnancy and its associated factors among sexually active never-married youth in Shanghai	SRH outcomes	Pregnancy	Cross-sectional	China	Female and male	15-24		Urban and rural	Community	High	Weighted proportion analyses estimated that 13.8% of females and 17.7% of males had been involved in an unintended pregnancy, and 99.0% and 90.5% of such pregnancies were reported to have ended in abortion by females and males, respectively. Controlling for sexual behaviour factors and residence history, multivariate hazard analyses with Weibull functions found increased hazard among older female youth (19-21 vs. 15-18 years old) but decreased hazard among older male youth (15-18 vs. 19-21/22-24 years old) as compared with the younger groups.
Wei, W.	2013	Adverse childhood experience as a risk factor for adolescent pregnancy in China	SRH outcomes	Pregnancy	Cross-sectional	China	Female	15-24		Urban	Health facility	Medium	A history of parents having separated or divorced increased the risk of adolescent pregnancy by 59% after controlling for confounding factors.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Wang, B.	2007	Sexual attitudes, pattern of communication, and sexual behavior among unmarried out-of-school youth in China	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	15-24	Out-of-school	Urban	Community	Medium	60% held favourable attitudes towards premarital sex, males were more likely to have favourable attitudes. Males generally did not communicate with either parent about sex, while one-third of female youth talked to their mothers about sexual matters. Both sexes chose their friends as the person with whom they were most likely to talk about sexual matters. 18% of the youth reported having engaged in sexual intercourse. One-fifth of sexually active youth had always used a contraceptive method, and one-quarter had been pregnant (or had impregnated a partner). There were no gender differences in rate of premarital sex or frequency of contraceptive use. Multivariate analysis revealed that age, education, family structure, parent's discipline, attitudes towards premarital sex, pattern of communication and dating were significantly associated with premarital sex.
Zhang, L.	2007	Parent-adolescent sex communication in China	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	15-19		Urban	Community	High	Sex communication with parents was relatively infrequent. Male adolescents were more likely to talk with fathers and female adolescents with mothers. Logistic regression analysis revealed that gender of adolescents, quality of communication with mothers on general topics, and adolescent's perception of mother being the main source of sex knowledge were predictive of the level of sex communication between mother and her adolescent children. Younger male adolescents (15-17) who had communicated sex issues with parents were more likely to report having had sexual experience.
Li, S.	2009	Characteristics and determinants of sexual behavior among adolescents of migrant workers in Shanghai (China)	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	11-16	Migrants	Urban	School / college / university	Medium	The percentage of adolescents who ever had sexual intercourse or had sexual intercourse in last three months was 7.2% and 4.3% in adolescents of migrant workers, respectively; in contrast, 4.5% and 1.8% in their peers of general residents, respectively. 47.3% adolescents of migrant workers and 34.3% of those adolescents of general residents reported no condom use in sexual intercourse during last three months. Multivariate logistic regression analyses found that migration was a independent risk

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													factor for sexual intercourse in last three months in our sampled adolescents. In adolescents of migrant workers, factors such as lower family income , younger age at first sexual intercourse, lower knowledge on HIV/AIDS, and fewer communication on HIV/AIDS related issues were related to sexual intercourse in last three months.
Yan, H.	2010	Family and peer influences on sexual behavior among female college students in Wuhan, China	Sexual behaviour	Premarital sex	Cross-sectional	China	Female	16-27		Urban	School / college / university	Medium	Over 18% of female students participating reported ever having sexual intercourse, of whom 31.52% had their first sexual intercourse at the age of 18 or younger with more than 50% at an age less than 20 years. Several socio-demographic, family, and peer factors were associated with ever having intercourse. Those more likely to engage in premarital sex were older; majored in art; were from one-child, richer and/or divorced families; had a mother with university or above education; had parents with a strict disciplinary style;; had middle-school close friends falling in love; and had current close friends living with boyfriends.
Guo, W.	2012	The timing of sexual debut among Chinese youth.	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	15-24	Out-of-school	Urban and rural	Community and school	Medium	The mean age at sexual debut was 22.8 years (22.5 years for men and 23.1 years for women). Sexual debut before age 18 was rare for both genders, and ages 21-24 appear to be the normative range for sexual debut. Life table analysis found that debut was earlier for males than for females, for those living in a rural area than for those in urban areas, and for those living in western China than for those in other regions.
Xiao, Z.	2012	Psychosocial Correlates of Premarital Sex Among College Students in Hunan Province, China	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	19-23		Urban	School / college / university	Medium	Students who were impulsive decision makers were more likely to have had premarital sexual intercourse. Those participants who perceived that their parents/friends would approve of their having sex and those who were more exposed to sexual media programs were more likely to have premarital sexual intercourse. Male students were almost 2 times more likely than female students to have had premarital sex.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Li, S.	2013	Sexual knowledge, attitudes and practices of female undergraduate students in Wuhan, China: the only-child versus students with siblings	Sexual behaviour	Premarital sex	Cross-sectional	China	Female	Mean 20		Urban	School / college / university	High	Compared with students with siblings, only-child students scored higher on sex-related knowledge, were more inclined to agree with premarital sex, multiple sex partners, one-night stands, extramarital lovers and homosexuality, and were more likely to have a boyfriend and experience sexual intercourse (73.6% vs. 61.4%; 24.0% vs. 14.0%). Only-children were less likely to experience coercion at first sex and have first sexual intercourse with men not their "boyfriends" than children with siblings (3.3% vs. 6.4%; 20.7% vs. 28.8%). There were no significant differences on other risky sexual behaviours (e.g. multiple sex partners and inconsistent condom use) between the only-child students and students with siblings.
Ong, J.	2013	Sexual activity and adolescent health risk behaviours amongst high school students in three ethnic Chinese urban populations	Sexual behaviour	Premarital sex	Cross-sectional	China	Female and male	Not specified ("grade 6-12")		Urban	School / college / university	High	The students (8%) reported being sexually active had marked differences in selected health outcomes when compared with the non-sexually experienced students. More than 90% of the sexually active students had tried alcohol, with more than 50% being regular drinkers, more than 30% testifying to binge drinking and nearly 50% reported depression in the past 12 months. Substance use, poorer perception of health and academic performance were also significantly higher in the sexually experienced students relative to their non-experienced counterparts.
Jejeebhoy, S. J.	2010	Experience seeking abortion among unmarried young women in Bihar and Jharkhand, India: delays and disadvantages	SRH outcomes	Abortion	Mixed methods	India	Female	15-24		Urban and rural	Health facility	Medium	Those who were unmarried were far more likely to report non-consensual sexual relations. As many as 25% of unmarried young women, compared to only 9% of married young women, had had a second trimester abortion. The unmarried were far more likely to report non-consensual sexual relations leading to pregnancy. They were also more likely to report such obstacles to timely abortion as failure to recognise the pregnancy promptly, exclusion from abortion-related decision-making, seeking confidentiality as paramount in selection of abortion facility, unsuccessful previous attempts to terminate the pregnancy, and lack of partner support. After controlling for background factors, findings suggest

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Kalyanwala, S.	2010	Abortion experiences of unmarried young women in India: evidence from a facility-based study in Bihar and Jharkhand	SRH outcomes	Abortion	Cross-sectional	India	Female	15-24		Urban and rural	Health facility	Medium	that unmarried young women who also experienced these obstacles were, compared to married young women, most likely to experience second trimester abortion. 83% of women realized they were pregnant within the first two months of their pregnancy, and 91% within the first trimester. 84% decided before the end of the first trimester to have an abortion, but only 75% obtained one in this period. One in six participants said that pregnancy had resulted from a non-consensual sexual encounter, and such reports were more frequent among those who obtained a second-trimester abortion. Women who were older or who had more schooling had a decreased likelihood of having a second-trimester abortion (odds ratios, 0.9 each), whereas those who lived in rural areas, those who did not receive full support from their partners and those who reported a forced encounter had an increased likelihood of having a late abortion (2.3-4.1).
Kalyanwala, S.	2012	Experiences of unmarried young abortion-seekers in Bihar and Jharkhand, India.	SRH outcomes	Abortion	Qualitative	India	Female	15-24		Urban and rural	Health facility	Low	Findings reveal that recognition of the unintended pregnancy was delayed for many adolescents, and those who suspected they were pregnant, further delayed acknowledging it. Once recognised, most confided in their partner, and for the most part, partners were supportive. A significant minority, including those who had experienced forced sex, did not have partner support and delayed the abortion until the second trimester of pregnancy. Family support was absent in most cases. Where provided, it was largely to protect family reputation. Unsuccessful attempts to terminate the pregnancy were made by several women, often with the help of partners or family members.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Santhya, K.G.	2011	Condom use before marriage and its correlates: evidence from India.	Sexual behaviour	Condoms	Mixed	India	Female and male	15-24		Urban and rural	Community	High	Only 7% of young women and 27% of young men who had had premarital sex had ever used condoms. Among both sexes, discomfort with approaching a provider or pharmacist for condoms was inversely correlated with most measures of condom use (odds ratios, 0.5), while having peers who had had premarital sex was generally positively correlated (1.6-2.9). Females who had had premarital sex only with non-romantic partners were less likely than those with only romantic partners to have used a condom at last sex (0.2), while males were generally more likely to use condoms with non-romantic than romantic partners (1.5-1.6). Among men, education level, age at sexual initiation and neighbourhood economic status were positively associated with use.
Alexander, M.	2006	Romance and sex: premarital partnership formation among young women and men, Pune district, India	Sexual behaviour	Dating and relationships	Mixed methods	India	Female and male	15-24	Urban slum / economically disadvantaged	Urban and rural	Community	Medium	Those who were unmarried were about as likely as those married to report a premarital partnership. Among those who were unmarried, a large percentage had expected to marry their romantic partner, but for a third of young women and half of young men the relationship had been discontinued.
Jaya, J.	2009	Premarital romantic partnerships: attitudes and sexual experiences of youth in Delhi, India	Sexual behaviour	Dating and relationships	Cross-sectional	India	Female and male	15-19	Urban slum / economically disadvantaged	Urban	Community	Low	62% of males and 53% of females reported that someone of the opposite sex had expressed an interest in them; 86% of males and 63% of females reported feeling good about it. In addition, 67% of males and 47% of females reported that they liked someone from the opposite sex. Males were more likely to seek information about the person they were interested in (76% vs. 61%), and to engage in heterosexual premarital sex (32% vs. 6%). Females were less likely than males to report that it is okay to engage in premarital sex if the male and female love one another (14% vs. 33%). Television and films were the most popular source of information on issues related to sexual health.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Gong, J.	2010	HIV risk and prevention behaviours, intentions, perceptions and knowledge among youth in Goa, India	Sexual behaviour	Higher risk sex	Cross-sectional	India	Female and male	14-20		Urban and rural	School / college / university	Medium	5.2% acknowledged ever having engaged in sex. Prior risk involvement was significantly correlated with future risk intention (odds ratio [OR]: 9.7-19.7), and those involved in one risk behaviour were more likely to engage in other risk behaviours (OR: 1.3-23.5).
Potdar, R.	2011	Factors influencing sexual initiation, multiple partners and condom use among male slum youth in Pune, India.	Sexual behaviour	Higher risk sex	Cross-sectional	India	Male	18-22	Urban slum / economically disadvantaged	Urban	Community	High	Growing up in a two-parent household, having adequate levels of parental supervision, experiencing violence in the home and having peers who drank significantly impact the age of sexual debut and the subsequent number of lifetime partners. Condom use at first intercourse appears to be significantly influenced by age of sexual debut and type of sexual partner. These findings indicate that in low-resource urban settings, the influence of family and friends as role models can play an important role in determining the initiation of sexual behaviour among male youth and in making behaviour choices that result in favourable health outcomes.
McManus, A.	2008	Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education	Knowledge and attitudes	HIV	Cross-sectional	India	Female	15-19		Urban	School / college / university	Medium	More than one third of students in this study had no accurate understanding about the signs and symptoms of STIs other than HIV/AIDS. About 30% of respondents considered HIV/AIDS could be cured, 49% felt that condoms should not be available to youth, 41% were confused about whether the contraceptive pill could protect against HIV infection and 32% thought it should only be taken by married women.
Guilamo-Ramos, V.	2012	Parent-Adolescent Communication About Sex in Rural India: U.S.-India Collaboration to Prevent Adolescent HIV	Knowledge and attitudes	Information and services	Qualitative	India	Female and male	14-18		Rural	Community	Medium	Findings from this research suggest that rural adolescents and their parents are interested in talking about sexual topics with one another and do so, albeit in a nuanced way. Even though adolescent boys and girls consistently identified sources other than their parents for information about sex and HIV/AIDS (e.g., television, textbooks, teachers, and peers), they nonetheless conveyed a strong desire to receive such information from and have conversations with their parents. Although few parents had initiated discussions about sex with their adolescents because of factors such as lack of information and embarrassment,

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													most expressed a desire and openness to having such discussions with their children, particularly in light of the health consequences of unwanted pregnancies, STIs, and HIV/AIDS.
Mishra, S. K.	2012	Socioeconomic correlates of reproductive morbidity among adolescent girls in Sikkim, India.	SRH outcomes	Menstruation	Cross-sectional	India	Female	14-21		Urban and rural	Community	High	Results of the study indicate that the prevalence of reproductive health morbidities among both married and unmarried girls is quite high. 40% of unmarried girls reported problems related to menstruation and 17% problems related to reproductive tract infections. Age, media exposure, and economic status emerged as significant correlates of treatment-seeking practices among both married and unmarried girls.
Juyal, R.	2014	Menstrual hygiene and reproductive morbidity in adolescent girls in Dehradun, India	SRH outcomes	Menstruation	Cross-sectional	India	Female	15-20+		Urban and rural	School / college / university	Low	Approximately 65% of the girls reported having dysmenorrhoea and 19% of the girls had given the history of excessive vaginal discharge with or without low backache/lower abdominal pain. Strong association was found between Reproductive Tract Infections and poor menstrual hygiene.
Hazarika, N. C.	2005	Perceptions of unmarried young women regarding family size, sexually transmitted diseases at residential regional institutes in northeastern India	Knowledge and attitudes	Multiple topics	Cross-sectional	India	Female	16-25		Not specified	School / college / university	Low	48.43% stated that the suitable age for marriage is >18 years old for women. More than half the respondents stated that the interval between child birth should be 3-5 years. Most of the respondents (96.17%) were of the opinion that both parents are responsible for determining the number of children. Knowledge of STDs and HIV was found in 91.8% and 74.04% of respondents, respectively.
Char, A.	2011	Assessing young unmarried men's access to reproductive health information and services in rural India	Knowledge and attitudes	Multiple topics	Mixed methods	India	Male	17-22		Rural	Community	High	Young unmarried rural Indian men's sexual and reproductive health (SRH) knowledge is limited, although the majority is familiar with condoms (99%). The young men identified electronic mass media (67%) as the prime source of reproductive health information, yet they lacked detailed knowledge of various contraceptives and felt ignored by health providers, who, they felt, would be capable of providing SRH information through interpersonal communication. Young men are more concerned about avoiding infections and securing sexual pleasure and less concerned about avoiding potential pregnancies. For

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													example, 68% of the young men were aware of condoms and their HIV/AIDS preventive role, but only about two-fifths mentioned condom use to prevent unwanted pregnancies. Although most young men (96%) knew where to access a condom, they felt uncomfortable or embarrassed doing so in their own villages or close by because of socio-cultural norms that prevented them from using contraceptives. Very few respondents (4%) disclosed using condoms themselves, but 59% said they knew someone from their peer group who had used them.
Nair, M. K.	2013	ARSH 2: Reproductive and sexual health knowledge, attitude and practices: comparison among boys and girls (10-24 y)	Knowledge and attitudes	Multiple topics	Cross-sectional	India	Female and male	15-24		Urban	Community	High	Higher percentage of boys knew about condoms (95.1%, p 0.001) whereas higher percentage of girls (56.5%, p 0.001) knew about copper-T. Girls had a better knowledge on legal age of marriage (91%, p 0.001), that both the partners are equally responsible for the problem of infertility (89.7%, p 0.009) and that the gender of the baby is determined by male sperm (60.4%, p 0.001).
Moni, S. A.	2013	Pregnancy among unmarried adolescents and young adults	SRH outcomes	Pregnancy	Case-control	India	Female	<25		Urban	Health facility	High	Logistic regression analysis showed a strong association between unmarried adolescent pregnancy and lack of parental supervision and control (OR 8.74, P = 0.000), poor intra-family relationship (OR 7.01, P = 0.000), family problem (OR 4.41, P = 0.000), lack of knowledge on sexual and reproductive health (OR 4.95, P = 0.0003), and non-engagement of adolescent in any productive activity (OR 4.41, P = 0.0373).
Banerjee, S. K.	2015	How prepared are young, rural women in India to address their sexual and reproductive health needs? a cross-sectional assessment of youth in Jharkhand	Knowledge and attitudes	Pregnancy	Cross-sectional	India	Female	15-24		Rural	Community	Medium	Married women were more likely to have received information on SRH, contraception and abortion than unmarried women. Among those who did receive any information, both married and unmarried women reported family and friends as the primary source for all three types of information (71 vs. 79 %, respectively). 71% of young unmarried women could not correctly respond to any of the five questions about safe abortion. Married and unmarried women also had limited agency in decision-making, freedom of

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Bhugra, D.	2007	Sexual attitudes and practices in North India: A qualitative study	Knowledge and attitudes	Premarital sex	Qualitative	India	Female and male	15-25		Urban	Community	Low	mobility, self-efficacy, and financial resources. Only 3% of unmarried women reported their ability to influence timing of pregnancy or marriage.
Alexander, M.	2007	Correlates of premarital relationships among unmarried youth in Pune district, Maharashtra, India	Sexual behaviour	Premarital sex	Cross-sectional	India	Female and male	15-24	Urban slum / economically disadvantaged	Urban and rural	Community	High	For girls, fear of parents, society and the unknown (i.e. getting pregnant) were seen as external controls in individual urge of sexual activity. The younger age group believed that fear of pregnancy, societal pressures and parental expectations and trust in them were the key factors which stopped them from indulging in premarital sex. However, it also transpired that, on occasion, curiosity and sexual urge overcame caution. There was poor access to information on reproductive health, and respondents relied on peers who themselves were poorly informed and to some degree to the media in order to gather health-related information. The younger age group, especially females, held more negative attitudes about homosexuality.
													Among young men, 17-24% had had a romantic relationship, 20-26% had engaged in some form of physical intimacy and 16-18% had had sex; the proportions among young women were 5-8%, 4-6% and 1-2%, respectively. Exposure to alcohol, drugs or pornographic films and having more frequent interaction with peers were positively associated with romantic and sexual relationships for both young women and young men. Educational attainment was negatively associated with both types of relationships for young women, but only with sexual relationships for young men. Closeness to parents was negatively associated with relationships only for young women. Young women whose father beat their mother were more likely than other young women to form romantic partnerships, and those beaten by their family had an elevated risk of entering romantic and sexual partnerships.

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Ghule, M.	2007	Attitude towards premarital sex among rural college youth in Maharashtra, India	Knowledge and attitudes	Premarital sex	Cross-sectional	India	Female and male	15-24		Rural	School / college / university	Medium	The majority of the students in the study expressed conservative attitudes towards premarital sexuality. Many students not only disagreed with casual sex but also considered it immoral. Gender bias i.e. permitting premarital sex for males and not for females, was reflected in their attitudes to some extent. Mean score indicated that male students had higher mean scores compared with their female counterparts and senior students compared with junior students, indicating more liberal attitudes towards sexuality. Bivariate analysis showed positive association between age; peer interaction; erotic exposure; habits of gutaka, tobacco, smoking and alcohol consumption; and knowledge about reproductive health issues with attitudes towards various sexuality issues. Multivariate analysis showed that female students studying in the commerce and science faculties were more liberal in attitude towards sexuality when compared with female students from the arts faculty.
Das, B. M.	2007	Adolescent male reproductive health: Awareness and behavior among peri-urban and rural boys of West Bengal, India	Sexual behaviour	Premarital sex	Cross-sectional	India	Male	15-18		Urban and rural	School / college / university	Low	Most boys from both groups understood the different modes of transmission of HIV/AIDS. However, the peri-urban boys appeared slightly more knowledgeable about the different modes of HIV/AIDS transmission. None of the boys appeared to have any knowledge about other STDs (e.g., gonorrhoea and syphilis). Discussing sex-related issues with friends was common among both groups of boys. A few of the adolescent males (PU 20% and R 7.14%) had experienced unprotected sexual intercourse. Among the rural boys who had experienced sexual intercourse, all had experienced vaginal intercourse with girls of their peer group. Among the peri-urban boys who had experienced sexual intercourse, a majority of them experienced vaginal (10) and a few anal (1) with the same sex. The peri-urban males reported that their sexual partners were girls and boys (in case of anal) of their peer group (8), or sisters-in-law (2).

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Kumar, G.	2011	Behavioral surveillance of premarital sex among never married young adults in a high HIV prevalence district in India.	Sexual behaviour	Premarital sex	Cross-sectional	India	Female and male	18-24		Urban and rural	Community	High	Of the never married persons aged 15-24 yrs, 21.7% (95% CI 18.7–24.7) males and 4.6% (95% CI 2.2–7.0) females reported having had sex. Only 22.3% males and 6.3% females reported consistent condom use for premarital sex in the last 6 months. The strongest associations with premarital sex for males were current use of alcohol and tobacco, and for females were not living with parents currently and being an income earner.
Santhya, K.G.	2011	Timing of first sex before marriage and its correlates: Evidence from India.	Sexual behaviour	Premarital sex	Mixed	India	Female and male	15-24		Urban and rural	Community	Medium	Life table estimates suggest that premarital sexual initiation occurred in adolescence for 1 in 20 young women and 1 in 10 young men. For the majority of these young people, their first sex was with an opposite-sex romantic partner. First sex, moreover, was unprotected for the majority and forced for sizeable proportion of young women. A number of individual, family, peer and community-level factors were correlated with age at first premarital sex. Moreover, considerable gender differences were apparent in the correlates of age at first premarital sex, with peer and parent-level factors found more often to be significant for young women than men.
Ghule, M.	2011	Correlates of sexual behaviour of rural college youth in Maharashtra, India.	Sexual behaviour	Premarital sex	Mixed	India	Female and male	15-24		Rural	School / college / university	High	Proportion of students with any sexual experience (penetrative and non-penetrative sex) was much higher in boys (29.8%) compared to girls (4.9%). Around 11 per cent boys and 1 per cent girls who reported penetrative sex (vaginal, /oral / anal), around half of them did not use condom. Homosexual experience was reported by 11 per cent boys and 3 per cent girls. AIDS awareness was observed high (89% and 87 % respectively among boys and girls). However the knowledge of sexually transmitted diseases was limited. Exposure to alcohol, drugs, pornographic films, having more frequent interaction with peers and working status of the students were positively related with penetrative and non-penetrative sex relationships for both boys and girls.

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Mukhopadhyay, D. K.	2012	Are the adolescent behaviors too risky? A school-based study in a district of West Bengal, India	Sexual behaviour	Premarital sex	Cross-sectional	India	Female and male	13-16+		Urban and rural	School / college / university	Medium	Almost one-tenth of respondents had premarital sexual intercourse.
Ray, S.	2012	Sexual and reproductive health issues among rural and urban adolescent boys of eastern India	Sexual behaviour	Premarital sex	Cross-sectional	India	Male	14-19		Urban and rural	School / college / university	Medium	Rural and urban boys differed significantly ($P < 0.05$) in their sexual attitudes and practices. Place of residence and exposure to media were found to be significant predictors of sexual activity among adolescents. Urban boys were significantly less likely to be involved in penetrative sexual activity ($OR = 0.42$) compared to rural ones.
Dave, V.	2013	A Study on High-risk Premarital Sexual Behavior of College Going Male Students in Jamnagar City of Gujarat, India	Sexual behaviour	Premarital sex	Cross-sectional	India	Male	18-24		Urban and rural	School / college / university	High	Among study subjects, 13.78% had one or more premarital sexual exposures. In students with positive premarital sexual history, the various sex partners were girlfriends (95.16%), commercial sex workers (14.5%), homosexuals (6.45%), and multiple sex partners (33.88%). Among students, 62.9% were using condom consistently. Three-fifth of the ones indulged in premarital sex, were in the age group of 16-20 at the time of sexual debut.
Sahay, S.	2013	Correlates of sex initiation among school going adolescents in Pune, India	Sexual behaviour	Premarital sex	Case-control	India	Female and male	12-19		Urban and rural	School / college / university	Medium	Adolescents studying in vernacular schools, accessing pornography and having unfriendly relationship with parents had higher likelihood of sex initiation. Adolescents who reported sexual abuse, Sexually Transmitted Diseases (STDs) symptoms, smoking habit and those who had not read scientific literature on reproductive and sexual health were more likely to have initiated sex early.
Jain, R.	2014	Sexual resilience within intimate relations among unmarried adolescent girls seeking abortion in an abortion clinic of Delhi, India	Sexual behaviour	Premarital sex	Cross-sectional	India	Female	12-20		Urban	Health facility	Low	Mean debut age was 17.32 years. Partners took more initiative to form emotional (64%) and physical relationship (78%). Adolescent girls' initiative reduced markedly from emotional (22%) to physical relation (5%). Correlation of sexual resilience with age, family income education and knowledge was not significant. It was significantly correlated with attitude toward premarital sex, self-esteem and partner pressure.

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Jaya, J.	2007	Nonconsensual sexual experiences of adolescents in urban India	Sexual behaviour	Violence and/or coercion	Cross-sectional	India	Female and male	15-19	Urban slum / economically disadvantaged	Urban	Community	Low	Thirty-two per cent of boys and 42% of girls reported being touched against their will. After multivariate adjustment, both boys and girls who had ever worked and those who had a friend of the opposite gender were more likely to report the experience. The most commonly reported perpetrators were female friends for boys (60%) and strangers for girls (93%). Fifteen per cent of boys and 3% of girls reported that someone forcibly tried to have a physical relationship with them. Boys who had ever worked were more likely to report the experience. Both boys and girls who had a friend of the opposite sex were more likely to report attempted forced physical relationship. The most commonly reported perpetrators were female friends for boys (72%) and neighbours (60%) for girls.
Santhya, K. G.	2014	Non-consensual sex within premarital relationships: experiences of young women in India	Sexual behaviour	Violence and/or coercion	Mixed methods	India	Female	15-24		Urban and rural	Community	Medium	33% reported that they were either persuaded (14%) or forced (19%) to engage in sex. Young women residing in urban areas and in communities reportedly characterised by physical fights among youth were more likely than their respective counterparts to have experienced sex by persuasion. Young women who had delayed sexual initiation and those who displayed self-efficacy were less likely than others to experience forced sex. Young women who had experienced geographic mobility in adolescence and who had witnessed parental violence were more likely than others to report forced sex. Finally, those in southern states were less likely than their northern counterparts to experience forced sex
Hald, G. M.	2013	Pornography consumption and non-marital sexual behaviour in a sample of young Indonesian university students	Sexual behaviour	Pornography	Cross-sectional	Indonesia	Female and male	18-23		Urban	School / college / university	High	The study found that pornography is as widely and readily consumed as in comparable international studies predominantly utilising Western background samples from more sexually liberal and less religious countries with very few laws on pornography. Gender differences in patterns of pornography consumption were pronounced and comparable with findings in international counterpart studies. For men only, pornography consumption was found to significantly predict common sexual behaviours in

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													non-marital relations.
Mohammad, K.	2007	Sexual risk-taking behaviors among boys aged 15-18 years in Tehran	Sexual behaviour	Higher risk sex	Cross-sectional	Iran	Male	15-18		Urban	Community	High	Having no access to Internet, feeling regretful at sexual debut, having one sexual partner in lifetime and lower knowledge of condoms are predictors of condom non-use. Older age, using alcoholic drinks, early sexual debut, and poor knowledge of reproductive physiology are predictors of multiple sexual partners among adolescent boys aged 15–18 years.
Hedayati - Moghaddam, M. R	2015	Sexual and reproductive behaviors among undergraduate university students in Mashhad, a city in northeast of Iran	Sexual behaviour	Higher risk sex	Cross-sectional	Iran	Female and male	18-25		Urban	School / college / university	Low	In single sexually experienced students, the mean age at first sex was 17.6 ± 3.3 years, 24% started sexual activity at <15 years, 34.3% had at least 3 partners and only 40.6% stated using condom in their last sex.
Yazdi, C. A.	2006	Knowledge, attitudes and sources of information regarding HIV/AIDS in Iranian adolescents	Knowledge and attitudes	HIV	Cross-sectional	Iran	Female and male	14-18		Urban	School / college / university	Low	Students reported that television (84%) and school teachers (66%) were the best sources of HIV/AIDS information, while parents (27%) and school books (15%) were least informative. Most students knew that heterosexual intercourse (90%) and shared intravenous needles (94%) can cause HIV infection; however, salient misconceptions were revealed. Only 53% were aware that condoms protect against infection through sexual intercourse. Knowledge of contraceptive methods was also low.
Malek, A.	2012	Sexual Knowledge among High School Students in Northwestern Iran	Knowledge and attitudes	Multiple topics	Cross-sectional	Iran	Female and male	Not specified		Urban	School / college / university	Medium	11.8% of the students had a low sexual knowledge, 46.7% had average and 41.5% had a high one. There was no significant difference between male and female students' general sexual knowledge. The highest knowledge was about being aware of the religious rules concerning sex.
Simbar, M.	2005	Reproductive health knowledge, attitudes and practices of Iranian college students	Sexual behaviour	Premarital sex	Cross-sectional	Iran	Female and male	Mean 23 male, 21 female		Urban	School / college / university	Low	54 students (8%) reported having sexual intercourse before marriage; 16% of males and 0.6% of females; 48% of them had used condoms. There was a mean knowledge score of 55% about methods of contraception, 57% about STIs and 54% about methods of HIV prevention. There were no significant differences between single and married students in knowledge about contraceptives, STIs and HIV prevention methods.

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Mohammadi, M. R.	2006	Reproductive knowledge, attitudes and behavior among adolescent males in Tehran, Iran	Sexual behaviour	Premarital sex	Cross-sectional	Iran	Male	15-18		Urban	Community	Medium	28% of the sample reported having engaged in sexual activity. Sexual experience was associated with older age, access to satellite television, alcohol consumption and permissive attitudes toward sex. Substantial proportions of respondents held misconceptions regarding condoms, STIs and reproductive physiology. Attitudes toward premarital sex were more permissive among respondents who were older, were not in school, had work experience, had access to the Internet or satellite television, lived separately from their parents, or reported having used alcohol, cigarettes or drugs.
Mahdavi, P.	2007	Passionate uprisings: young people, sexuality and politics in post-revolutionary Iran	Sexual behaviour	Premarital sex	Qualitative	Iran	Female and male	18-25		Urban	Community	Medium	Most of the young people interviewed were unmarried and were either engaged in sexual relations or had been at one time or another with a boyfriend/girlfriend or acquaintance. Many of the health risks that the young adults are exposing themselves to are unknown by them, as most reveal that they are uninformed about the consequences of unprotected sex, poly-drug use, multiple partners, abortion, self-administered contraceptive pills and other potential risk behaviours. Many women noted that as unmarried young adults they did not have access to oral contraceptives and, if they did, many indicated that they were fearful of purchasing these lest their parents or family members discover them.
Mohtashami, G.	2009	Correlates of the intention to remain sexually inactive among male adolescents in an Islamic country: case of the Republic of Iran	Knowledge and attitudes	Premarital sex	Cross-sectional	Iran	Male	15-17		Urban	School / college / university	Medium	57% of this sample planned to remain abstinent until marriage. Another 23% rejected the notion of remaining abstinent and 20% were uncertain. Multinomial logistic regression revealed that students whose mothers were employed and who received a higher daily allowance were more likely to report that they would not remain abstinent. No significant independent relationship between HIV/AIDS-related knowledge and an intention to remain

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													abstinent was detected. However, we documented that (1) perceived subjective norms, (2) self-efficacy, (3) and perceived susceptibility to contracting the HIV virus all are associated with the intention to remain sexually inactive among adolescents.
Farahani, F. K.	2011	Associations between family factors and premarital heterosexual relationships among female college students in Tehran.	Sexual behaviour	Premarital sex	Cross-sectional	Iran	Female	Mean 21		Urban	School / college / university	High	Very strict and very relaxed parental control during adolescence were both associated with having had a boyfriend, but only the former was associated with having had premarital sex. Respondents were more likely to have had premarital intercourse if they did not live with both parents (OR =2.0) or if their family had more liberal values (OR=1.3); they had reduced odds of having had sex if they had a closer relationship with their parents (OR=0.7).
Farahani, F. K.	2012	Adolescent Males and Young Females in Tehran: Differing Perspectives, Behaviors and Needs for Reproductive Health and Implications for Gender Sensitive Interventions.	Sexual behaviour	Premarital sex	Cross-sectional	Iran	Female and male	15-18		Urban	Community and school	Medium	Reproductive health knowledge among male adolescents was poor compared to that of their female peers. Although premarital friendships were moderately acceptable from view points of both males and females, the majority were against premarital sex, particularly among female participants. There were evidences of gender-based double standards in perceptions of premarital sexuality among both males and females; particularly, it was stronger among males than females. Male adolescents reported earlier and greater experiences of premarital hetero- sexual intimacy and sexual contact than females. Multiple partners were also more common among males than females. Females had a tendency to regret first sexual contact more than males, which reflects that first sex is more likely to be unplanned and unwanted among females compared to males.

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Farahani, F. K.	2012	Correlates and Determinants of Reproductive Behavior among Female University Students in Tehran.	Sexual behaviour	Premarital sex	Cross-sectional	Iran	Female	20-23		Urban	School / college / university	High	Low self-efficacy (OR=7.87, p <0.001), perceived peers' liberal attitude on virginity (OR= 4.33), perception of parents' liberal attitude towards relationship with the opposite sex and poor family atmosphere (OR=3.04 and 2.20, p <0.001, respectively) were predictors of ever having any type of sexual experience after controlling for other factors. The only predictors of penetrative sex remained in the logistic model were older age (OR=5.95), low self-efficacy (OR=10.86), poor family atmosphere (OR= 2.96), liberal parental attitude (OR=4.29) and liberal peer norms on virginity (OR= 4.90).
Sychareun, V.	2013	Awareness and attitudes towards emergency contraceptive pills among young people in the entertainment places, Vientiane City, Lao PDR	Knowledge and attitudes	Contraception	Cross-sectional	Lao PDR	Female and male	15-30		Urban	Venue	High	21% of unmarried young people had heard of emergency contraceptive pills. Females and younger adolescents (15-19 years) were less likely to have heard of emergency contraception.
Sychareun, V.	2013	Risk perceptions of STIs/HIV and sexual risk behaviours among sexually experienced adolescents in the Northern part of Lao PDR	Sexual behaviour	Higher risk sex	Cross-sectional	Lao PDR	Female and male	14-19		Rural	Community	High	48% of adolescents had ever had sex. Mean age of first sex was 14.6 for males and 13.7 for females. Of these, 7% of males and 4% of females had ever had anal sex. 71% of males had experienced the cultural practice of "open foreskin" and 98% of girls "vagina breakthrough" - where pre-pubescent young people between the ages of 11-15 must have sex with an older person (thought to bring on maturation). Of those who had had sex in the last 12 months, 54% of males and 31% of females had had 2 or more partners. 43% of males and 37% of females had not used a condom in the last 6 months. Despite the high prevalence of risk behaviours, risk perception related to STIs and HIV was low.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Sychareun, V.	2011	Customary adolescent sexual practices among the Akha of northern Lao PDR: considerations for public health	Sexual behaviour	Premarital sex	Qualitative	Lao PDR	Female and male	14-19		Rural	Community	Medium	This study explores Akha understandings of customary first pre-pubertal sex acts, a thonh thong ('break through vagina' [BV]) for girls and yaha heu ('open foreskin' [OF]) for boys, (sex with an older, experienced person) which are thought to enable the maturing of bodies into adulthood. The study also examines the practice of a thor ta yang ('Welcome Guest') in which sexually initiated girls have sex with male visitors to Akha villages. The study found that many young women experience BV as painful and traumatic. However, since all Akha in the study 'knew' that young bodies will not mature into attractive, healthy adults if they do not perform BV and OF, attitudes were largely positive.
Thanavanh, B.	2013	Knowledge, attitudes and practices regarding HIV/AIDS among male high school students in Lao People's Democratic Republic	Sexual behaviour	Condoms	Cross-sectional	Lao PDR	Male	16-19		Urban	School / college / university	High	The majority of students surveyed were aware that HIV can be transmitted by sexual intercourse (97.7%), from mother to child (88.3%) and through sharing needles or syringes (92.0%). Misconceptions about transmission of HIV were observed among 59.3% to 74.3% of respondents. Positive attitudes towards HIV/AIDS were observed among 55.7% of respondents. Nearly half of the surveyed students (45.3%) said that they would be willing to continue studying in a school with HIV-positive friends, and 124 (41.3%) said they would continue attending a school with HIV-positive teachers. Ninety-four (31.3%) students had a history of sexual intercourse, and 70.2% of these students had used a condom. However, only 43.9% said they used condoms consistently.
Sychareun, V.	2013	Predictors of premarital sexual activity among unmarried youth in Vientiane, Lao PDR: the role of parent-youth interactions and peer influence	Sexual behaviour	Premarital sex	Cross-sectional	Lao PDR	Female and male	18-24		Urban	Community	High	Most respondents held positive attitudes towards premarital sex, with males having more liberal attitudes than females (mean score of 2.68 vs. 2.32, $p < 0.001$). Prevalence of premarital sexual activity was higher among males than females (44.7% and 19.2%, respectively). Predictors of premarital sex for males were age, sexual attitudes, perceived parental expectations regarding sex, dating and peer influence. For females, predictors were father's level of education, parent-youth sexual communication,

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													peer influence and liberal sexual attitudes.
Wong, L. P.	2012	Qualitative inquiry into premarital sexual behaviours and contraceptive use among multiethnic young women: implications for education and future research	Sexual behaviour	Contraception	Qualitative	Malaysia	Female	14-26		Urban	School / college / university	High	The study found a lack of knowledge about sexual issues and contraception among the participants. Many engaged in unprotected sexual intercourse and relied on periodic abstinence, natural methods, and traditional folk pregnancy preventive practices. The findings also revealed numerous categories of factors influencing sexual attitudes and behaviours: ethnic group and religion, level of religiosity, peer pressure and norms, and parental monitoring. With regard to condom use, factors such as embarrassment about condom acquisition, low perceived susceptibility to sexually transmitted infections (STIs), and perceived efficacy of traditional and folk methods of contraception, were uncovered from the discussions.
Ahmadia n, M.	2014	Risky sexual behavior among rural female adolescents in Malaysia: a limited role of protective factors	Sexual behaviour	Higher risk sex	Cross-sectional	Malaysia	Female	13-17		Rural	School / college / university	High	Of the 770 rural female students, about 3.2% of respondents reported experience of sexual intercourse in the past three months. Out of those sexually active girls, 36% were 17 years old and 20% stated having sexual intercourse with more than one partner, and 72% did not use contraception during the most recent sexual intercourse. Midnight activities, peer-sexual disorder, self-evaluation, and attitude toward sexual health were significant predictors of sexual intercourse in rural girls in Malaysia
Ng, C.	2006	Bridging the gap between adolescent sexuality and HIV risk: the urban Malaysian perspective.	Knowledge and attitudes	HIV	Qualitative	Malaysia	Female and male	18-22		Urban	School / college / university	High	There were definite differences in gender roles in terms of how adolescents perceived sex, selection of sex partners and communication with their partners. Definitions of stable and casual relationships differed between males and females. Most participants were concerned about pregnancy rather than sexually transmitted diseases or HIV infection when they interpreted safe sex. reasons for not practising safe sex include trust

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
													between sex partners, complacency, low perception of risk, and negative attitudes towards condom use.
Ab Rahman, A. ,	2011	Knowledge of sexual and reproductive health among adolescents attending school in Kelantan, Malaysia.	Knowledge and attitudes	Multiple topics	Cross-sectional	Malaysia	Female and male	Mean 15		Not specified	School / college / university	High	Questionnaire items with the fewest correct responses included: whether one can get pregnant after a single act of sexual intercourse (30.4%), whether sexual intercourse causes sexually transmitted diseases (STDs) (12.4%) and whether washing the vagina after sexual intercourse prevents pregnancy (17.0%). Adolescents' main source of sexual information was friends (64.4%). An independent t-test revealed the mean knowledge score was significantly higher among females than males on items assessing whether the genitalia may be touched freely by family members, females having attained menarche may become pregnant if having sex, whether pregnancy will occur if there is penetration of the penis into the vagina, whether premarital sexual intercourse causes pregnancy and if there is a relationship between abandoned babies and premarital pregnancies. The mean knowledge score assessing whether pregnancy can be prevented using condoms was higher among males than females.
Hamjah, S.H.	2012	Factors relating to premarital pregnancy amongst Muslim adolescents in Malaysia	SRH outcomes	Pregnancy	Cross-sectional	Malaysia	Female	Not specified ("adolescent")	Women's shelter	Urban	Venue	Low	The results of the study found that among the contributing factors that cause young Muslim females to engage in unsafe premarital sex resulting in pregnancy are the parents, peer-influence, mass media and personal issues. Notably however, the study found that the primary factor was the lack of religiosity and religious practice among female Muslim adolescents, despite the efforts of Islamisation in Malaysia to promote abstinence rather than safe sex.

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Lee, L. K.	2006	Premarital sexual intercourse among adolescents in Malaysia: a cross-sectional Malaysian school survey	Sexual behaviour	Premarital sex	Cross-sectional	Malaysia	Female and male	12-19		Urban and rural	School / college / university	High	5.4 per cent of the total sample were reported to have had sexual intercourse. The proportion among male students who had had sex was higher (8.3 per cent) compared with female students (2.9 per cent). The mean age at first sexual intercourse was 15 years. One per cent of students reported that they had been pregnant or had made someone else pregnant. Adolescent sexual intercourse was significantly associated with (1) socio-demographical factors (age, gender); (2) environmental factors (staying with parents); and (3) substance use (alcohol use, cigarette smoking, drug use), even after adjustment for demographical factors.
Anwar, M.	2010	Awareness of school students on sexually transmitted infections (STIs) and their sexual behavior: a cross-sectional study conducted in Pulau Pinang, Malaysia	Sexual behaviour	Premarital sex	Cross-sectional	Malaysia	Female and male	15-20		Not specified	School / college / university	Low	10.6% of students claimed that they never heard about STIs. Approximately 12.6% claimed to have sexual experience of which 75.7% had their sexual debut at 15-19 years and 38.2% had more than 3 partners. Sexual experience was found to be significantly associated with gender ($p = 0.003$), ethnicity ($p = 0.001$) and education level ($p = 0.030$). However, multiple partner behaviour was significantly associated only with gender ($p = 0.010$). Mean knowledge score was 11.60 out of 33 and knowledge level was significantly associated with religion ($p = 0.005$) education level ($p = 0.000$), course stream ($p = 0.000$), socioeconomic class ($p = 0.000$) and sexual experience ($p = 0.022$).
Wong, L. P.	2012	An exploration of knowledge, attitudes and behaviours of young multiethnic Muslim-majority society in Malaysia in relation to reproductive and premarital sexual practices	Knowledge and attitudes	Premarital sex	Cross-sectional	Malaysia	Female	17-26		Urban	School / college / university	High	Respondents had low scores for knowledge of reproduction and pregnancy (median=4, of maximum score 10), contraceptive uses (median=6, of maximum score 16) and contraceptive availability (median=3, of maximum score 13). The majority of women surveyed do not have liberal values in relation to premarital sexual behaviour (median=37, of maximum 40); higher scores on this scale corresponded to opposing premarital sex. The multivariate analyses showed that ethnic group was the strongest correlate of knowledge and attitude scores; being of Malay Muslim ethnicity was associated significantly with lower

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													knowledge scores and premarital sex permissiveness. Other significant correlates were year of study, maternal occupational groups, level of religious faith, dating status and urban-rural localities. Level of premarital sex permissiveness was inversely correlated with reproduction and pregnancy knowledge score, and contraceptive knowledge scores.
Manaf, M. R. A.	2014	premarital sex and its predicting factors among Malaysian youths	Sexual behaviour	Premarital sex	Cross-sectional	Malaysia	Female and male	Mean 18		Not specified	School / college / university	Low	The prevalence of premarital sex among trainees of these youths was 4.6%. A total of 6.2% of the female trainees as compared to 2.6% of their male counterpart had had premarital sex. Analysis using multiple logistic regression revealed only six significant predictor variables which were religion, race, lover, reading or watching porn, masturbation and bullying.
Rahman, A.	2015	Factors Associated With Attitude Toward Premarital Sexual Activities Among School-Going Adolescents in Kelantan, Malaysia	Knowledge and attitudes	Premarital sex	Cross-sectional	Malaysia	Female and male	13-17		Not specified	School / college / university	Medium	Multiple logistic regression revealed that the risk factors for having permissive attitudes toward practice of premarital sexual activities were male students (odds ratio [OR] = 1.83; 95% confidence interval [CI] = 1.34-2.48), being less religious (OR = 2.02; 95% CI = 1.49-2.73), and younger age group of students (13 to 14 years old; OR = 1.42; 95% CI = 1.05-1.92). Having good knowledge on sexual and reproductive health was a protective factor against permissive sexual attitude (OR = 0.27; 95% CI = 0.20-0.36).
Suzuki, K.	2006	Factors associated with the reproductive health risk behavior of high school students in the Republic of the Marshall Islands	Sexual behaviour	Premarital sex	Cross-sectional	Marshall Islands	Female and male	13-20		Urban	School / college / university	Low	67% of males and 44% of females had ever had sex. 12% of males and 8% of females had ever experienced pregnancy (self or partner). Over 80% reported intention to use condoms; less than three-quarters knew a source of information about sexuality
Hla Soe, T.	2008	Sexual and reproductive health needs of vulnerable youth in Myanmar	Knowledge and attitudes	Multiple topics	Qualitative	Myanmar	Female and male	15-24	Out-of-school, economically disadvantaged	Urban	Community	Medium	The results indicated that a majority of young people of both sexes were deficient in knowledge of the locations and functions of reproductive organs. The majority of respondents of both sexes said that their main health concern was AIDS. premarital sex among youth, 16-20 years of age, was

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													identified in our study. Malaria and AIDS were mentioned as information needed by young people. TV and magazines/journals were prioritized as preferred channels of disseminating health messages.
Htay, S.	2010	Risk behaviours and associated factors among medical students and community youths in Myanmar.	Sexual behaviour	Premarital sex	Cross-sectional	Myanmar	Female and male	15-24		Urban and rural	Community and school	Low	10.1% of medical students engaged in premarital sex, whereas among community youths, the corresponding rate was 11.9%. Premarital sexual experience did not differ significantly between the two groups. Risk behaviours were correlated with one another. Having close friends who engaged in similar behaviours was found to be the major contributing factor for those kinds of risk among both groups. There was a significant difference in the prevalence of all risk behaviours between male and female respondents. Such risk behaviours were more dominant among males, while being very low among females.
Andersen, K. L.	2015	Marital status and abortion among young women in Rupandehi, Nepal	Knowledge and attitudes	Abortion	Cross-sectional	Nepal	Female	16-24		Urban and rural	Community	Medium	Never-married women were more likely than ever-married women to report receiving contraception or abortion information in the past year from television, radio, or a friend or neighbour. Only 45% knew that abortion was legal, and fewer ever-married women were aware of abortion legality. Never-married women expected more negative responses from having an abortion than ever-married women.
Adhikari, R.	2010	Are Nepali students at risk of HIV? A cross-sectional study of condom use at first sexual intercourse among college students in Kathmandu	Sexual behaviour	Condoms	Cross-sectional	Nepal	Female and male	15-20+		Urban	School / college / university	Medium	Unmarried students were significantly more likely to have used a condom at first sexual intercourse compared with married students.
Adhikari, R.	2009	Factors affecting awareness of emergency contraception among college students in Kathmandu, Nepal	Knowledge and attitudes	Contraception	Cross-sectional	Nepal	Female and male	15-20+		Urban	School / college / university	Medium	69.3% of unmarried youth had ever heard about emergency contraception. Similarly, the awareness level was significantly higher among younger, unmarried youth who were from outside Kathmandu Valley, who lived with friends, and who had received reproductive health (RH) education in school/college. NOTE: Only 85% males and 92% of females were aged 15-24, the rest were older. Unsure which of these were married versus

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													unmarried.
Puri, M.	2006	Sexual behavior and perceived risk of HIV/AIDS among young migrant factory workers in Nepal	Sexual behaviour	Higher risk sex	Mixed methods	Nepal	Female and male	14-19	Migrants	Urban	Venue	High	One in five boys and one in eight unmarried girls reported experience of sexual intercourse. Early sexual experimentation, multiple partners, and low and irregular use of condoms are not uncommon. Instances of sexual exploitation by factory owners or managers were documented but were rare. Most non-regular sex partners were described as friends from the same factory or community. Despite high-risk behaviour, relatively few young people considered themselves to be at risk of getting STIs or HIV/AIDS. Information on the possible consequences of unsafe sex is inadequate.
Mahat, G.	2006	HIV/AIDS knowledge, attitudes and beliefs among Nepalese adolescents	Knowledge and attitudes	HIV	Cross-sectional	Nepal	Female and male	13-17		Urban	School / college / university	Low	The majority of the adolescents had a moderate level of overall HIV/AIDS knowledge, but lacked knowledge in the areas of mode of transmission and prevention of HIV/AIDS. Approximately 79% thought that AIDS was a big problem and 67% were afraid of getting AIDS. However, only 16.7% reported that they were likely to get AIDS, and 18.7% did not perceive living in Kathmandu as a risk for HIV/AIDS
Mahat, G.	2012	HIV/AIDS Knowledge and Self-Efficacy Among Late Adolescents in Nepal	Knowledge and attitudes	HIV	Cross-sectional	Nepal	Female and male	17-25		Urban	School / college / university	Medium	Nepalese youth had moderate HIV/AIDS knowledge and a moderate level of self-efficacy. They, however, lacked knowledge in certain aspects of HIV transmission. HIV/AIDS knowledge was strongly correlated with self-efficacy for limiting sexual risk behaviour. There was no statistical difference in HIV/AIDS knowledge and self-efficacy by gender. No significant differences were found on HIV/AIDS knowledge and self-efficacy by the level of education.
Regmi, P.	2010	Barriers to sexual health services for young people in Nepal	Knowledge and attitudes	Information and services	Qualitative	Nepal	Female and male	15-24		Urban and rural	School and venue	Medium	The following themes were identified in the data: embarrassment talking about SRH, poor negotiation skills especially for girls, poor youth-friendly services,

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Adhikari, P.	2007	Knowledge and practice regarding menstrual hygiene in rural adolescent girls of Nepal	Knowledge and attitudes	Menstruation	Cross-sectional	Nepal	Female	13-15		Rural	School / college / university	Low	poor knowledge on SRH, and influence of alcohol and the role of peers in sexual decision-making.
Jaiswal, S.	2005	HIV/AIDS and STI related knowledge, attitude and practice among high school students in Kathmandu valley	Sexual behaviour	Premarital sex	Cross-sectional	Nepal	Female and male	13-20		Urban	School / college / university	Low	Only 6.0% of girls knew that menstruation is a physiological process, 36.7% knew that it is caused by hormones. 94% of girls use pads during their period but only 11.3% dispose it. Overall knowledge of menstruation and hygienic management of menstruation were 40.6% and 12.9% respectively.
Adhikari, R.	2009	Premarital sexual behavior among male college students of Kathmandu, Nepal	Sexual behaviour	Premarital sex	Cross-sectional	Nepal	Male	15-30		Urban	School / college / university	Medium	45.8% had prior knowledge of HIV, 65.2% knew that HIV/AIDS could be transmitted by sharing same needle, 46.2% knew that vaccine is not yet available for HIV/AIDS. 41.5% knew that pus in the urine is a symptom of STI and 41.7% knew that STI is curable. 4.2% of the study group had previous sexual intercourse, 64.2% had sexual intercourse with friend and 35.17% had sexual intercourse with commercial sex workers.
													NOTE: Only 85% of respondents were aged 15-24 - the rest were older. 39% reported that they have had premarital sex. Sex with commercial sex workers, multiple sex partners, and inconsistent use of condom with non-regular partner was common among the students. 57% had used condom at the first sexual intercourse. Students aged 20 and above were more likely to have premarital sex compared with students aged 15-19. Men who had liberal attitude towards male virginity at marriage were almost two times more likely to have engaged in premarital sex compared to their counterparts who have conservative attitude towards male virginity at marriage. Hindu students were more than two times (OR = 2.5) more likely to have premarital sex. Men who have close unmarried friends who have experienced premarital sexual intercourse were eight times (OR = 8.4) more likely to be sexually active compared to those who did not.

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Regmi, P.	2010	"There are too many naked pictures found in papers and on the net": factors encouraging premarital sex among young people of Nepal	Knowledge and attitudes	Premarital sex	Qualitative	Nepal	Female and male	18-22		Urban and rural	School and venue	Medium	Findings indicate that curiosity towards sex and sexuality issues, personal appearance, peer pressures, exposure to print and electronic media and financial motives are key factors in encouraging premarital sexual intercourse.
Gyan Bahadur, B. C.	2013	Premarital sex behaviors among college youths of Kathmandu, Nepal	Sexual behaviour	Premarital sex	Cross-sectional	Nepal	Female and male	18-24		Urban and rural	School / college / university	High	Late youths of age 20-24 were more likely to experience premarital sex than early youths of age 18-19 years old. Urban youths were less involved in premarital sex behaviour than rural youth. Youths having negative attitudes towards premarital sex were more likely to experience premarital sex than a positive attitude. Youths who had good relationship with their parents had less premarital sex experience than youths having poor relationship with their parents.
McMillan, K.	2011	The impact of socio-cultural context on young people's condom use: evidence from two Pacific Island countries	Sexual behaviour	Condoms	Qualitative	Pacific	Female and male	18-25	Vanuatu and Tonga	Urban	Community	Medium	Note: included married and unmarried young people. Young people had positive attitudes towards condoms (protection against STIs, HIV and pregnancy) but reported very low use of condoms among young people in their communities. Reasons for non-use related to: socio-cultural beliefs and attitudes (stigma associated with premarital sex, condoms associated with promiscuity, transactional sex) that impacted on young people's access to condoms and contributed to shame / embarrassment; gender norms; and to a lesser extent perceptions about negative impacts of condoms on intimacy and male pleasure.
Corner, H.	2005	Sexual health behaviours among Pacific Island youth in Vanuatu, Tonga and the Federated States of Micronesia	Sexual behaviour	Higher risk sex	Cross-sectional	Pacific	Female and male	15-19	Out-of-school; Vanuatu, Tonga, FSM	Urban and rural	Community	Low	Moderate to high percentages of youth were sexually active (had a least one sexual partner) in the Pacific island nations of Vanuatu (49.7%), Tonga (35.5%) and the Federated States of Micronesia (76.1%). Young men were more likely to engage in sexually risky behaviour than young women. They were more likely to be sexually active, have had multiple sexual partners and have had sex when drunk or high. Of those sexually active, more young men than women in Vanuatu (36.1% compared with 30.6%) and Micronesia (54.2% compared with 50%) never

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													used protection against STIs. However, of the sexually active Tongan youth, the proportion of females (61.1%) who reported never using protection against STIs was nearly double the proportion reported by Tongan males (32.2%).
Shaikh, B. T.	2006	Assessing knowledge, exploring needs: a reproductive health survey of adolescents and young adults in Pakistan	Knowledge and attitudes	Multiple topics	Cross-sectional	Pakistan	Female and male	Mean 17		Rural	Community	Low	Adolescents and young adults do have some knowledge of SRH issues. Males are relatively more knowledgeable than females about puberty (M = 68%; F = 58%), pregnancy (M = 55%; F = 43%), family planning (M = 62%; F = 50%) and sexually transmitted infections (M = 56%; F = 44%). Yet, a large majority needs clarification on their concepts and perceptions. NOTE: Study did not specify age range of participants, or marital status
de Lind van Wijngaarden, J.	2013	Sexual abuse, social stigma and HIV vulnerability among young feminised men in Lahore and Karachi, Pakistan	Sexual behaviour	Violence and/or coercion	Qualitative	Pakistan	Transgender	14-20	Transgender women	Urban	Community	Low	These young people face high levels of stigma, violence and sexual abuse. The average age of first sex was 11 years old and all reported having been raped during childhood and early adolescence, often several times. While some mothers and siblings were quietly supportive, young feminised men often end up running away from home, finding support as a member of a hijra dera, a 'pseudo-household' led by an older feminised man or guru, in which they find employment as dancers or sex workers. After their entry into sex work there is little or no opportunity to use condoms. The hijra dera offer an important entry point for improved social support and sexual health programmes, including efforts to ensure young feminised men postpone their sexual debut and/or improve their sexual health, retain access to education, explore alternative forms of employment and improve access to health care.

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de Irala, J	2009	Relationships, love and sexuality: what the Filipino teens think and feel	Knowledge and attitudes	Dating and relationships	Cross-sectional	Philippines	Female and male	13-18		Not specified	School / college / university	Low	Students reported that they obtained information about love and sexuality mainly from friends. However, they valued parents' opinion more than friends'. They revealed few conversations with their parents on these topics. A majority of them would like to have more information, mainly about emotion-related topics. Almost half of respondents were not aware that condoms are not 100% effective in preventing STIs or pregnancies. More girls, compared to boys, were sensitive and opposed to several types of sexism. After adjusting for sex, age and institution, the belief of 100% condom effectiveness and the approval of pornography and sexism were associated with being sexually experienced.
Upadhyay, U. D.	2006	Do perceptions of friends' behaviors affect age at first sex? Evidence from Cebu, Philippines	Sexual behaviour	Premarital sex	Cohort	Philippines	Female and male	14-16 and 17-19		Urban	Community	Medium	Boys and girls, who at ages 14 to 16 years, perceived that their friends had ever had boyfriends/girlfriends, dated, held hands, kissed, petted or had sex were significantly more likely to have experienced that behaviour by ages 17 to 19 years. For each additional behaviour an adolescent perceived his or her friends to have experienced, the hazard of having sex at a younger age increased by 1.15 (p<.02) among boys and 1.19 (p<.002) among girls, after adjusting for mothers' / caretakers' disapproval of premarital sex and other factors.
Upadhyay, U. D.	2006	Before first sex: gender differences in emotional relationships and physical behaviors among adolescents in the Philippines	Sexual behaviour	Premarital sex	Cohort	Philippines	Female and male	17-19		Urban	Community	Medium	Males engage in precoital physical behaviours and first sex at younger ages than females. Although the standard order in which the two sexes engage in emotional relationships for the first time is the same, males progress through the sequence more quickly than females. After adolescents have progressed through the sequence of emotional relationships, there is a gap of at least a year before they begin to have sex. In the multivariate analysis, rapid progression through the sequence of emotional relationships was associated with initiating sex at a younger age for females (hazard ratio, 1.5), but not for males

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Gomez, M.	2011	Sexual Behavior Among Filipino High School Students Who are Deaf.	Sexual behaviour	Premarital sex	Qualitative	Philippines	Female and male	16-26	Disability	Urban	School / college / university	Low	The results showed that despite cultural taboo, the participants were active in sexual activities that range from masturbation to full intercourse. Some reported that sexual abuse by a relative or an adult is the reason for the onset of sexual activity.
Gipson, J.	2014	Gendered Differences in the Predictors of Sexual Initiation Among Young Adults in Cebu, Philippines	Sexual behaviour	Premarital sex	Cohort	Philippines	Female and male	15, 19, 22, 26		Urban	Community	Medium	Household, family, peer, and individual characteristics have disparate influences on sexual initiation among Filipino boys and girls. Boys' sexual initiation was positively associated with urbanicity, household wealth, and the presence of a family member working abroad, whereas for girls, these variables had no significant effects. Unique effects were also found for girls - mother's education was negatively associated, and girls' number of siblings was positively associated, with higher hazards of sex. Additionally, the effects of some variables on the occurrence of first sex differed across time, indicating that boys and girls may be differentially influenced by contextual characteristics across adolescence.
Sanga, K.	2014	Unintended pregnancy amongst women attending antenatal clinics at the Port Moresby General Hospital.	SRH outcomes	Pregnancy	Cross-sectional	PNG	Female	15-49		Urban	Health facility	Low	NOTE: This study includes married and unmarried women of all ages, does disaggregate by age and marital status but not together. Women under the age of 20 were more likely to have unintended pregnancies than older women, and unmarried women were more likely to have unintended pregnancies than married women.
Kelly, A.	2010	Gendered talk about sex, sexual relationships and HIV among young people in Papua New Guinea	Knowledge and attitudes	Sexuality / gender	Qualitative	PNG	Female and male	Not specified		Not specified	Community	Low	Irrespective of gender, respondents predominately understood sex as being for the sole purpose of reproduction within marriage. When discussing sex and sexual relationships, young men used explicit language and referred specifically to sexual organs and activities. Young women did not. Less concerned for privacy, young men talked in public spaces and in groups with same-sex peers about sex and sexual expression, whereas young women discussed such matters one-on-one and in private.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Raman, S.	2015	Identifying and overcoming barriers to adolescent sexual and reproductive health in the Solomon Islands: perspectives and practices of health, education and welfare workers	Knowledge and attitudes	Information and services	Mixed methods	Solomon Islands	Female and male	Not specified ("youth workers")		Urban and rural	Community, school, health facility	Low	Several barriers to providing adolescent friendly SRH services were identified including ambivalent health worker attitudes, knowledge gaps and inadequate training. Socio-cultural attitudes, resource and infrastructure constraints, and poor understanding of youth and SRH policy were also noted.
Olsson, P.	2010	Unmarried women's decisions on pregnancy termination: Qualitative interviews in Colombo, Sri Lanka	SRH outcomes	Abortion	Qualitative	Sri Lanka	Female	18-30		Urban	Health facility	High	NOTE: Includes women 18-30 years old, kept this article in because there is little available on Sri Lanka and abortion. Becoming pregnant in a love relationship was predominant in this sample. Awareness of contraceptives varied and initial reaction to the pregnancy involved strong contradictory emotions. Multiple interrelated factors were considered in the decision-making for termination. Family pressure was the most prominent factor followed by the partner's qualities and attitude towards the pregnancy, economic factors and own feelings, values and future fertility. The women described that their own emotional, religious and economic reasons for continuing the pregnancy were often outweighed by their responsibility to the family, male partner and unborn child.
Perera, B.	2006	Sexual behavior of young adults in Sri Lanka: Implications for HIV prevention.	Sexual behaviour	Condoms	Cross-sectional	Sri Lanka	Female and male	18-20		Urban and rural	School / college / university	High	Over half of the males and approximately one-third of the females reported that they were sexually active at the time of the study, with penetrative sexual experiences reported by 20.1% of males and 3.1% of females. Only 26.5% of males and less than 10% of females reported having ever used a condom when participating in vaginal, anal or oral intercourse.
Rajapaksa-Hewagee, N.	2015	Sexual and reproductive knowledge, attitudes and behaviours in a school going population of Sri Lankan adolescents	Sexual behaviour	Premarital sex	Cross-sectional	Sri Lanka	Female and male	16-19		Urban and rural	School / college / university	Medium	Most reported a good parent-child relationship (88%). A minority (34%) discussed sexual issues with parents. Health professionals were the preferred source of sexual information (32%) rather than parents (12.5%) or friends (5.6%). Less than 1% demonstrated satisfactory sexual and reproductive knowledge levels. 1.7% were sexually active (30 boys vs. 5

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Rongkavil it, C.	2007	Health risk behaviors among HIV-infected youth in Bangkok, Thailand	Sexual behaviour	Condoms	Cross-sectional	Thailand	Female and male	16-25	Living with HIV	Urban	Health facility	Low	girls), the majority with same age partners. 57% used contraception at first intercourse. Twenty-eight participants (40%) were on antiretroviral therapy at baseline visit. Mean adherence was 94.3-98.2% over the past month and 90.9-96.3% over the past 3 months, though up to one-third reported less than 95% adherence. The proportion of youth with consistent condom use in the previous 30 days at baseline (55.6%) was comparable to the proportion at 3-month visit (58.3%). Men were more likely to have a partner with unknown human immunodeficiency virus (HIV) status and were less likely to disclose HIV status to their partners. Forty-nine youth (70.0%) had used alcohol in the past 12 months; nine (12.9%) had used more than 20 times. Approximately 1/4 had used alcohol in the previous 30 days at baseline and at 3-month visit. Substance use besides cigarettes was uncommon.
Haque, M. R.	2009	Risk perception and condom-use among Thai youths: findings from Kanchanaburi Demographic Surveillance System site in Thailand	Sexual behaviour	Condoms	Cross-sectional	Thailand	Male	15-24		Urban and rural	Community	Medium	A greater proportion of unmarried youth engaged in sexual activity before the age of 20 years and condom-use was inconsistent. Unmarried youth were more three times more likely to perceive the risk of STIs and use condoms regularly with their partners than married men.
Khumsaen , N.	2009	Determinants of actual condom use among adolescents in Thailand	Sexual behaviour	Condoms	Cross-sectional	Thailand	Female and male	18-21		Not specified	School / college / university	Medium	66.7% had been sexually active. 51 participants (28.3%) reported that they never used condoms at the beginning of a sexual relationship. A total of 57 (31.7%) reported that they had not used condoms the last few times they had engaged in sexual relationships. 46 (25.6%) reported that, in general, they never used condoms in a sexual relationship. Adolescents who had positive attitudes about condoms were more likely to use condoms. Adolescents who had higher condom use self-efficacy were more likely to use condoms.

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Chemnasi ri, T.	2010	Inconsistent condom use among young men who have sex with men, male sex workers, and transgenders in Thailand.	Sexual behaviour	Condoms	Cross-sectional	Thailand	Male and transgender	15-24	Men who have sex with men, male sex workers, transgender women	Urban	Venue	Low	Of MSM, 46.7%, of MSWs, 34.9% and of TGs, 52.3% reported recent inconsistent condom use. In multivariate analysis, receptive anal intercourse (MSM, MSWs), receptive and insertive anal intercourse, living alone and a history of sexual coercion (MSWs), not carrying a condom when interviewed (MSM, TGs), lower education, worrying about HIV infection and a history of sexually transmitted infections (TGs) were significantly and independently associated with inconsistent condom use.
Chamratri thirong, A.	2010	Spirituality within the family and the prevention of health risk behavior among adolescents in Bangkok, Thailand	Sexual behaviour	Dating and relationships	Cross-sectional	Thailand	Female and male	13-14		Urban	Community	Low	Participation in pre-sexual behaviours increases with age with the most common behaviours being holding hands, hugging and kissing on the cheek. The more intimate behaviours (kissing on the lips and mouth and touching breasts or other private parts) are reported by 10% or less of 14-year-old study participants with more experiences reported by boys. Structural equation models indicate that positive direct and indirect associations of the spirituality of parents and teens within a family and the prevention of adolescent risk behaviours are significant and consistent.
Tangmunkongvorakul, A.	2010	Intimate relationships among adolescents in different social groups in northern Thailand	Sexual behaviour	Dating and relationships	Mixed methods	Thailand	Female and male	17-20	Out-of-school	Urban	School and venue	Low	Quantitative and qualitative data from more than 1,750 unmarried young people aged 17-20 years revealed that adolescents from different social and educational backgrounds had significantly different types of intimate relationships. In the Thai context, social class differences are mostly based on young people's educational backgrounds and their families' financial power. Perceptions of love and relationships were interpreted according to social strata and sex. Notably, less well-off young people were likely to engage in much riskier sexual relationships.
Rasamimari, A.	2007	Predictors of Sexual Behaviors Among Thai Young Adults	Sexual behaviour	Higher risk sex	Cross-sectional	Thailand	Female and male	18-24		Urban and rural	School / college / university	Low	The results showed that geographic residence and negotiation for safer sex were related to a young adult's ever having had sexual intercourse; gender, HIV knowledge, and negotiation for safer sex were related to the number of sexual partners; and geographic residence was related to condom use.

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Powwattana, A.	2009	Sexual behavior model among young Thai women living in slums in Bangkok, Thailand.	Sexual behaviour	Higher risk sex	Cross-sectional	Thailand	Female	15-24	Urban slum / economically disadvantaged	Urban	Community	High	55.8% were sexually active with 41.8% having vaginal sex without using condom. Significant enabling factors included perceived ability to precautions (odds ratio [OR] = 1.7), relational gain thinking (OR = 1.5), and curious gain thinking (OR = 1.3). The significant protective factors were decision-making dominance (OR = 0.3), perceived ability to say no (OR = 0.7), and ethical-related punishment avoidance thinking (OR = 0.8).
Patel, S.	2013	Elevated alcohol and sexual risk behaviors among young Thai lesbian/bisexual women.	Sexual behaviour	Higher risk sex	Cross-sectional	Thailand	Female	18-24	Lesbian or bisexual	Urban	Venue	Medium	Nearly one-third of women aged 18–24 recruited from Chiang Mai drinking venues identified as lesbian/bisexual. As compared to their heterosexual counterparts, lesbian/bisexuals reported higher positive alcohol expectancy scores, more harmful drinking, earlier age at sexual debut, and higher number of lifetime sexual partners.
Viseskul, N.	2015	Factors Related to Sexual Self-Efficacy among Thai Youth Living with HIV/AIDS	Sexual behaviour	Higher risk sex	Cross-sectional	Thailand	Female and male	14-21	Living with HIV	Not specified	Health facility	Medium	There were low levels of sexual activity with 26% having ever had sex and 14% reporting sex in the last 6 months. Of those who had ever had sex 29% reported multiple partners in the last 6 months and 58% had never used a condom. The scores of the sexual self-efficacy scale and its subscales were significantly lower in those aged 17 to 21 than in 14 to 16. Sexual risk behaviours were significantly higher in those aged 17 to 21 than in 14 to 16. The sexual self-efficacy scales were inversely related to the risk behaviours of having sex, having multiple partners, and drinking alcohol in the last 6 months.
Rasamimari, A.	2008	HIV risk behaviours and situations as perceived by Thai adolescent daughters and their mothers in Bangkok, Thailand	Knowledge and attitudes	HIV	Qualitative	Thailand	Female	12-14		Urban	School / college / university	Medium	Content analysis suggested that the behaviours considered most likely to result in HIV infection of Thai adolescent females were having sex without protection and drug use, and the most likely situations placing them at HIV risk were pubs/bars and boyfriends' or friends' houses when there is no parental or adult

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Durongritichai, V.	2012	Knowledge, attitudes, self-awareness, and factors affecting HIV/AIDS prevention among Thai university students	Knowledge and attitudes	HIV	Cross-sectional	Thailand	Female and male	Mean 18		Urban	School / college / university	Low	supervision. Girls reported that HIV/AIDS-prevention programmes should provide education about the causes and dangers of sexually transmitted infections, including HIV/AIDS and prevention strategies.
Saranritichai, K.	2006	Adolescent sexual health behavior in Thailand: implications for prevention of cervical cancer	Sexual behaviour	Premarital sex	Qualitative	Thailand	Female and male	13-19		Rural	Community	Low	The university student's knowledge, attitudes, self-awareness, and preventive behaviours toward HIV/AIDS were at a high level. The results from the multiple regression analysis identified self-awareness, faculty, sex, sexual-risk score, income-per-month, GPA, and knowledge as significant independent predictors of HIV/AIDS preventive behaviours. These factors contributed to 36.9% of the explanation of HIV preventive behaviours, and the strongest predictor was found to be self-awareness.
													Factors contributing to low sexual risk behaviour were helping family to do housework, an emphasis on learning, listening to parents, and following their advice. Adolescent behaviour leading to high sexual risk included being very close to friends, having a wide social circle, going out for enjoyment at night time, returning home late at night, drinking alcohol, smoking, paying less attention to learning, not listening to parents, and not following their advice. Adolescent sexual behaviour was found to comprise: 1) sexual activities themselves; 2) non-disclosure of having sex; and 3) protective behaviour. Sexual activities were ranked from low risk to high risk of sexual health. Low risk included having a steady boy/girlfriend, hugging, and kissing. High risk sexual behaviour featured unprotected sex, abuse or rape, and abortion. Important influences were: eagerness to learn and try to have sex, men's sexual desire, peer group value of having sex, and material value. The adolescents demonstrated no willingness to disclose having a boy/girl friend, having sex and negative consequences like becoming pregnant. Sexual protective behaviour was up to males, whether they were willing to use a condom, with females having little power to negotiate.

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Liu, A.	2006	Sexual initiation, substance use, and sexual behavior and knowledge among vocational students in northern Thailand	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female and male	15-21		Not specified	School / college / university	Medium	Males initiated sexual intercourse at an earlier age than females (median ages of 17 and 18, respectively). At any given age, sexual initiation was associated with having a non-agricultural background and using alcohol or methamphetamine (adjusted rate ratios, 1.3-2.9). For males, initiation was also associated with having parents who did not live together, having a friend as a confidant, tobacco use, high perceived risk for HIV and high STI knowledge (1.3-1.7). For females, other factors associated with earlier initiation were younger age at interview, living away from family, lacking a family member as a confidant, high perceived risk for STIs and ever having smoked marijuana (1.3-2.4).
Srisuriyawet, R.	2006	Gender and sexual experience differences in adolescent sexual behavior in Thailand: psychosocial factors	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female and male	15-22		Urban	School / college / university	Low	14% of female and 36% of male secondary students had ever had sex. Adolescents who had had sex were less likely to report intention to use condoms than those who had never had sex. Females reported a higher intention to use condoms than males. Sexually experienced young people felt more pressure to have sex from peers than those who had never had sex, and males more so than females.
Powwattana, A.	2008	Differences of sexual behavior predictors between sexually active and nonactive female adolescents in congested communities, Bangkok metropolis.	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female	15-24	Urban slum / economically disadvantaged	Urban	Community	High	Among the sexually active, 68.8% had vaginal or anal sexual intercourse (11.7%) without using a condom. Significant enabling predictors among the sexually active included sexual self-efficacy (precaution), and gain thinking (relationship), whereas punishment avoidance thinking (negative consequence) had a negative influence: it accounted about 11.0%. Among

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													sexually non-active, alcohol consumption, power in a relationship (decision making dominance), and gain thinking (relationship) accounted for 26.9% of the variance in explaining sexual behaviour.
Lee, B.	2009	Risk-taking behaviors among vertically HIV-infected adolescents in northern Thailand	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female and male	>12 (mean 15)	Living with HIV	Urban	Health facility	Low	18.5% reported previous alcohol use but none reported drug use; 35.2% reported presexual activity, and 3.7% reported sexual activity. Nearly all (96.3%) knew that HIV could be transmitted sexually, but knowledge regarding other sexually transmitted infections (STIs) was poor. Nearly half (48.1%) had never disclosed their status to anyone.
Sridawruang, C.	2010	Attitudes of adolescents and parents towards premarital sex in rural Thailand: a qualitative exploration	Knowledge and attitudes	Premarital sex	Qualitative	Thailand	Female and male	15-19		Rural	Community	High	Four themes were identified from the data: the social judgement of girls; boys have nothing to lose; considering risks and parents as problem solvers. All themes relate to the continuing existence of double standards concerning the social norm for premarital sex as applied to young women on one side and young men on the other. Findings suggest that female teens may have little control over sexual decision-making. They may be unable to negotiate condom use due to unequal power relations between boys and girls.
Supametaporn, P.	2010	Waiting for the right time: how and why young Thai women manage to avoid heterosexual intercourse	Sexual behaviour	Premarital sex	Qualitative	Thailand	Female	18-23		Urban	Community	Medium	Young women used the basic social process they called "waiting for the right time" in order to maintain heterosexual abstinence. Waiting for the right time involved one overarching condition, honouring parental love, and included three overlapping properties: learning rules (such as conservative dress and behaviour, avoiding physical contact with males), planning life path (setting life goals), and ways of preserving virginity, including avoiding situations that might lead to sex.

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Tangmunkongvorakul, A.	2011	Sexual perceptions and practices of young people in Northern Thailand	Sexual behaviour	Premarital sex	Mixed methods	Thailand	Female and male	17-20	Out-of-school	Urban	Community and school	Medium	62% of males and 34% of females had ever had sex with median age of first sex 16 for males and 17 for females. Ever having sex was more common among out of school young people than university or vocational school students. Boy/girlfriend was the most commonly reported sexual partner. 10% of males and 7% of females reported that the most recent partner was the same sex. Condom was the most commonly used method to prevent STI or pregnancy - however only 47% of males and 29% of females reported using a condom at last sex. 9% of males and 26% of females had experienced forced or coerced sex.
Peltzer, K.	2011	Prevalence and Social Correlates of Sexual Intercourse among School-Going Adolescents in Thailand.	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female and male	12-17		Urban and rural	School / college / university	High	Overall the prevalence of sexual intercourse in the past 12 months was 11.0% (14.6% males and 7.6% females). Variables positively associated with the outcome in multivariable analysis were male gender (OR = 1.66; 95% CI 1.14–2.42), older age, ≥15 years (OR = 2.60, 1.80–3.74), current alcohol use (OR = 2.22, 1.46–3.36), psychosocial distress (OR = 2.11, 1.44–3.09) and among females current smoking (OR = 5.47, 1.62–18.48), lifetime drug use (AOR = 4.35, 1.04–18.3) and lack of parental or guardian bonding (AOR = 0.51, 0.27–0.97).
Tangmunkongvorakul, A.	2012	Coital Experience Among Adolescents in Three Social-Educational Groups in Urban Chiang Mai, Thailand	Sexual behaviour	Premarital sex	Cross-sectional	Thailand	Female and male	17-20	Out-of-school	Urban	Community and school	Medium	62% of males and 34% of females had ever had sex with median age of first sex 16 for males and 17 for females. Out of school males had 2.3 increased odds of premarital sex, males whose parents were divorced 1.7 increased odds. Having ever consumed alcohol (OR 3.8), methamphetamines (OR 5.2) or tobacco (OR 2.5) were also associated with premarital sex. For females, out of school young women had 4.3 times increased odds of premarital sex; 2.8 increased odds if there was a history of parental conflict. Alcohol (OR 3.7) and smoking (3.5) were also associated with premarital sex.

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Vuttanont, U.	2006	Smart boys and "sweet girls" -- sex education needs in Thai teenagers: a mixed-method study	Knowledge and attitudes	Sexuality / gender	Mixed methods	Thailand	Female and male	12-18		Urban and rural	School / college / university	High	Five important influences on adolescents' sexual attitudes and behaviour were noted: ambiguous social roles; heightened sexual awareness and curiosity; gaps in knowledge and skills; limited parental input; impulsivity and risk-taking. Males' status depends on sexual performance; females experience traditional conservative norms and have to manage dating relationships in the context of no parental support and limited life skills to negotiate relationships. School-based sex education is biologically focused and inconsistently delivered.
Wongpanarak, N.	2010	Early adolescent Thais' perceptions of sexual identity	Knowledge and attitudes	Sexuality / gender	Qualitative	Thailand	Female and male	12-14		Urban	School / college / university	Medium	Findings revealed sexual identity was perceived by Thai adolescents to include: biological sex; gender role; gender identity; and, sexual orientation. Biological sex was perceived as female or male, based on one's sexual organs, while gender role, feminine or masculine, was perceived through external appearances including clothing, personality and manners. With respect to gender identity, girls expressed pride in potentially becoming a mother and being protected, but were conflicted about female characteristics and being disadvantaged when compared to males. Boys were proud of being strong, being gentlemen and having freedom. Family upbringing, the media and school environment were factors perceived to be related to sexual identity.
Whitehead, S. J.	2008	Increase in sexual risk behavior and prevalence of Chlamydia trachomatis among adolescents in Northern Thailand	SRH outcomes	STIs	Cross-sectional	Thailand	Female and male	15-21		Not specified	School / college / university	Medium	From 1999 to 2002 C. trachomatis prevalence increased from 3.2% to 7.5% (P <0.001) in women and from 2.5% to 6.0% (P <0.001) in men. There was an increase in the reported mean lifetime number of steady sexual partners among both men (3.4-4.7, P = 0.01) and women (2.5-3.3, P <0.001), and in the mean lifetime number of casual partners among men (1.1-2.1, P <0.001) and women (0.3-1.1, P = 0.04). Reported consistent condom use decreased significantly among women with casual partners (43%-19%, P = 0.03) but not among men (25%-31%, P = 0.31). Risk of STI was associated with

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													lifetime history of 4 or more partners.
Celentano, D.	2008	Sexually transmitted infections and sexual and substance use correlates among young adults in Chiang Mai, Thailand	SRH outcomes	STIs	Cross-sectional	Thailand	Female and male	18-25	Substance use	Urban	Venue	Low	38% of participants had at least one laboratory confirmed STI. Herpes simplex virus and Chlamydia were significantly more common among women, whereas hepatitis B virus was significantly more common among men. Men reported a greater number of sexual partners than women, and condom use at last sex was infrequent. In multivariate analysis, women > or =20 years of age, with > or =2 heterosexual partners in the past year and a younger age at sexual debut were significantly more likely to have a prevalent STI. Men > or =20 years of age, with > or =2 heterosexual partners in the past year and who enrolled both sex and drug network members were significantly more likely to have a prevalent STI, whereas men who used a condom at last sex were significantly less likely to have a prevalent STI.
Pradubmook-Sherer, P.	2009	Prevalence and correlates of adolescent dating violence in Bangkok, Thailand.	Sexual behaviour	Violence and/or coercion	Cross-sectional	Thailand	Female and male	14-19	Out-of-school	Urban	Community and school	High	Thai youths maintain very intensive dating relationships. The out-of-school adolescents hold the highest dating violence scores. While males' dating violence scores were higher, the females were involved in all types of dating violence, exceeding the males on verbal/emotional violence.
Thongprian, V.	2009	Thai female adolescents' perceptions of dating violence	Knowledge and attitudes	Violence and/or coercion	Qualitative	Thailand	Female	15-17		Urban	School / college / university	Low	Participants stated that a romantic relationship was likely to deteriorate or end sooner after partners had engaged in premarital sex, and believed engaging in sexual intercourse decreased men's respect for their partners as well as one's own self-esteem. Sexually violent acts rarely were included in the definition of dating violence. Participants described three different categories of causes of dating violence: (a) individual characteristics and circumstances (e.g., poor temper and anger management, wanting to dominate a partner, use of

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													physical power to solve conflicts); (b) situations related to the relationship (partners' flirtatiousness and subsequent jealousy, lack of open communication, mistrust of the partner, financial problems); and (c) raised in a family in which parents used physical, emotional, or verbal violence to solve disagreements
Pradubmook-Sherer, P.	2011	Youth attitudes toward dating violence in Thailand.	Knowledge and attitudes	Violence and/or coercion	Cross-sectional	Thailand	Female and male	14-19	Out-of-school	Urban	Community and school	High	Thai youths in general reported attitudes that were supportive of dating violence. The variables more closely related to attitudes toward dating violence were personal variables. Peer influence, partner relationships, and family characteristics were related to higher support for dating violence. Females reported higher endorsement of dating violence than males.
Kennedy, E.C.	2013	"Be kind to young people so they feel at home": a qualitative study of adolescents' and service providers' perceptions of youth-friendly sexual and reproductive health services in Vanuatu	Knowledge and attitudes	Information and services	Qualitative	Vanuatu	Female and male	15-19		Urban and rural	Community and school	Medium	Socio-cultural norms and taboos regarding adolescent sexual behaviour were the most significant factors preventing adolescents from accessing services. These contributed to adolescents' own fear and shame, judgmental attitudes of service providers, and disapproval from parents and community gate-keepers. Lack of confidentiality and privacy, costs, and adolescents' lack of SRH knowledge were also important barriers. Adolescents and service providers identified opportunities to make existing services more youth-friendly. The most important feature of a youth-friendly health service described by adolescents was a friendly service provider. Free or affordable services, reliable commodity supply, confidentiality and privacy were also key features. The need to address socio-cultural norms and community knowledge and attitudes was also highlighted.

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Kennedy, E.C.	2014	These issues aren't talked about at home: a qualitative study of the sexual and reproductive health information preferences of adolescents in Vanuatu	Knowledge and attitudes	Information and services	Qualitative	Vanuatu	Female and male	15-19		Urban and rural	Community and school	High	Much of the SRH information targeting adolescents focused on sexually transmitted infections and HIV. While this information was valued, important gaps were identified including prevention of pregnancy, condom use, puberty, sexuality and relationships. Peer educators and health workers were adolescents' preferred sources of information because they were considered knowledgeable and trustworthy. Parents were not a common source but were preferred, particularly by girls, despite considerable socio-cultural barriers. Schools were an important but underutilised source of information, as were a range of media sources.
Do, T. H.	2014	Determinants of condom use at sexual debut among young Vietnamese	Sexual behaviour	Condoms	Cross-sectional	Viet Nam	Female and male	14-25		Urban and rural	Community	Medium	Of 605 adolescents and youths who had engaged in premarital sex, 28.6% reported condom use at first sexual intercourse. Condom use at sexual debut was less common in females than males [odds ratio (OR)=0.15; 95% confidence interval (95% CI)=0.07-0.30] and less common in those who experienced peer pressure to engage in social higher risk behaviours (OR=0.57; 95% CI=0.32-0.99). Condom use was more common if a friend/acquaintance or a stranger/sex worker was the first sexual partner (OR=2.20; 95% CI=1.16-4.17 and OR=17.90; 95% CI=6.88-46.54) respectively, each compared with fiancé/boyfriend/girlfriend as first sexual partner.
Tho, L. H.	2007	Sexual behaviors of alcohol drinkers and non-drinkers among adolescents and young adults in Nha Trang, Vietnam	Sexual behaviour	Higher risk sex	Cross-sectional	Viet Nam	Female and male	16-24		Urban and rural	Community	Medium	The majority of respondents (65.9%) had consumed alcohol, 25.8% had sexual touching with boy/girl friends, and 10.1% of respondents had engaged in sexual experiences including vaginal sex, anal sex, and/or oral sex. Young men were significantly more likely to drink than young women were ($p < 0.001$), and alcohol use was significantly associated with engagement in sexual experiences ($p < 0.001$). There was a strong significant different between sexual touching and alcohol drinking among males ($p < 0.001$) and females ($p < 0.001$). Forty per cent of young men who did not use condom in last sex and 45% of young men who had multiple sex partners

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													were drinkers compared to 4.8% and 1.6% of non-drinkers, respectively.
Ngo, A.	2008	Internet influences on sexual practices among young people in Hanoi, Vietnam	Knowledge and attitudes	Information and services	Qualitative	Viet Nam	Female and male	15-19		Urban	Venue	Medium	The Internet is a source of knowledge and information where Vietnamese young people can learn about different perspectives of sex and sexuality when they are beginning to engage in identity construction.]It is also a medium for communication in which teenagers can publicly discuss sexual information gleaned from online media and other sources (e.g. parents, schools) with little risk for social censure. Respondent narratives reflect the complex processes of sexual identity formation and relationship development, showing how young Vietnamese consume and then incorporate imagery and information from the Internet into their sexual performances, experimenting with some of the suggestions and then relaying the outcomes to others through online discussions.
Nguyen, H. N.	2006	Knowledge of contraceptives and sexually transmitted diseases and contraceptive practices amongst young people in Ho Chi Minh City, Vietnam	Knowledge and attitudes	Multiple topics	Qualitative	Viet Nam	Female and male	15-24		Urban	Health facility	Medium	Fears of side effects of taking pills and rumours and beliefs regarding condoms were quite common among young people. Sexual education provided by educational institutions and within families did not provide clear knowledge on the sensitive topics such as contraceptive methods, and other issues related to sexuality for unmarried people. While sex issues were discussed openly among unmarried men, most unmarried women felt uncomfortable or expressed difficulty when talking about these issues; and the passiveness of unmarried women in making the decision of using condoms as well as contraceptives was marked

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Doskoch, P.	2011	Parent-Child Discussions About Sexuality Are Uncommon in Vietnam	Sexual behaviour	Multiple topics	Cross-sectional	Viet Nam	Female and male	15-20		Urban and rural	Community	Medium	<p>About a third of both males (36%) and females (32%) reported having ever had a girlfriend or boyfriend. However, sexual activity was relatively uncommon: Just 19% of males and 4% of females reported having ever engaged in sexual touching, and only a few males (and no females) said they had had oral sex (2%) or vaginal sex (3%). Parents were rarely aware of their child's relationships and sexual activity. Of the 36 parents whose son reported having had a girlfriend, only 10 (28%) knew about the relationship; similarly, of the 25 parents whose daughter had had a boyfriend, only five (20%) were aware. The proportions of sexually experienced adolescents whose parents knew or thought that their child had engaged in sexual touching was even lower (0–7%), although the sample sizes were very small (15 sons and three daughters).only 11% said the same about conversations concerning sexuality—and 76% had never had a discussion about the topic. Discussions about pregnancy and birth control were also uncommon: Nearly three in four parents (72%) had never broached these subjects. They were more willing, however, to discuss HIV, other STIs and standards of sexual behaviour, as 57–74% of parents said they discussed these topics sometimes or often.</p> <p>Most parents said they were “uncomfortable” or “very uncomfortable” discussing sexuality with their sons (62%) and daughters (61%). On average, parents rated their comfort level for talking about sexuality and relationships as 7.7 on an 18-point scale. Parents with more education spoke with their children about these topics more frequently, and with less discomfort, than less-educated parents. The most common barriers to talking about sexuality were concern that the child would become more interested in sex (87%), parental embarrassment (65%), lack of time (65%), and feeling uninformed (63%).</p>

Author	Year	Title	Domain	Topic	Study design	Country	Population	Age	Other	Urban / rural	Setting	Quality	Findings
Kaljee, L. M.	2007	Sexual stigma, sexual behaviors, and abstinence among vietnamese adolescents: implications for risk and protective behaviors for HIV, STIs, and unwanted pregnancy	Sexual behaviour	Premarital sex	Mixed methods	Viet Nam	Female and male	15-21		Rural	Community	Medium	In the qualitative interviews, youths report a strong adherence to ideals and values regarding abstinence outside of marriage. Youths reported low rates of engagement in vaginal, anal, and/or oral sex with a significant difference in reported behaviours between males and females. A total of 15 of 32 (46.9%) sexually active youths reported rarely or never using condoms. Females had significantly higher scores for perceived sexual stigma than males whereas males scored significantly lower than females on a scale of perceived self-efficacy for abstinence.
Nguyen, H. N.	2007	Sex, love and gender norms: sexual life and experience of a group of young people in Ho Chi Minh City, Vietnam	Knowledge and attitudes	Premarital sex	Qualitative	Viet Nam	Female and male	15-24		Urban	Health facility	Medium	There were two general attitudes towards premarital sex. One view supported young people in a serious, loving relationship engaging in sex before marriage; the other opposed premarital sex because it affected the reputation of girls and their families. These general attitudes were similar to the views on virginity. Premarital sex was more acceptable for young people in a serious, loving relationship with certain commitment to marriage. Young men considered sex a way to express their love and to become more intimate. Women's view was that premarital sex only occurred within a serious, loving relationship or when there was a serious commitment to marriage.
Do, M.	2010	Attitudes toward premarital sex in contemporary Vietnam: findings from a national survey	Knowledge and attitudes	Premarital sex	Cross-sectional	Viet Nam	Female and male	15-49		Urban and rural	Community	Medium	17.7% of unmarried young men (15-24) were accepting of men having sex before marriage, compared with 10.3% of young women. For premarital sex for women, 12.3% of young men accepted it versus 5.6% of young women. Attitudes of Vietnamese toward premarital sex generally remained conservative. Unmarried respondents were more open than those who were married. A growing openness toward premarital sex among the younger age was found only among the married.

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Bui, T. C.	2012	Perceived gender inequality, sexual communication self-efficacy, and sexual behaviour among female undergraduate students in the Mekong Delta of Vietnam	Sexual behaviour	Premarital sex	Cross-sectional	Viet Nam	Female	19-27		Urban	School / college / university	Medium	Among the 72.4% of students who had ever had boyfriends, 44.8% indicated that their boyfriends had asked for sex, 13% had had penile-vaginal sex and 10.3% had had oral sex. For those who had had penile-vaginal sex, 33% did not use any contraceptive method, including condoms, during their first sexual intercourse. The greater a student's perception that women were subordinate to men, the lower her self-efficacy for sexual communication and the lower her actual frequency of discussing safer sex matters and asking her partner to use a condom. Sexual communication self-efficacy was associated with actual contraceptive use ($P=0.039$) but only marginally with condom use ($P=0.092$) at first sexual intercourse.



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