

Knowledge, experience, and utilisation of sexual and reproductive health services amongst Nepalese youth living in the Kathmandu Valley

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Highlights

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Less than a third of youth aged 15–24 had knowledge of the most fertile period and under a half of the possibility of pregnancy at first intercourse.

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Women were less likely than men to have used any contraceptive at their first sexual encounter.

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Fewer than one in ten young people had knowledge about the most common STI, Chlamydia.

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Feelings of shame are the major barrier to accessing sexual and reproductive health services.

Abstract

Objective

Youth have the right to utilise sexual and reproductive health (SRH) services and information to protect themselves from negative SRH outcomes. This study aimed to assess knowledge, experience and use of SRH services amongst youth living in urban areas of the Kathmandu Valley.

Methods

We conducted a two stage cluster sampling cross-sectional household survey of young men and women aged 15–24 living in the Kathmandu Valley using a structured questionnaire.

Results

Amongst the 680 young men and 720 young women participants, less than two-thirds had knowledge about the fertile period and less than a half about pregnancy risk at first sex. Over three quarters of young men and women had knowledge of condoms, and pills but less than half knew about implants or intrauterine devices. Age at first sex was similar for men and women but women were significantly less likely to have participated willingly in their first sexual encounter and were less likely to have used any contraception (for both $p < 0.001$). Almost all men and women (97.9%) had heard of sexually transmitted infections (STIs) but only 8% had heard about the most common STI, Chlamydia. Over 90% of youth reported feelings of shame as the major barrier to accessing SRH services.

Conclusions

Gaps exist between youth SRH knowledge and practices which leave them vulnerable to sexual ill health. This may indicate a lack of confidence in SRH services but also likely reflects the cultural and religious environment that hampers open expression of sexual and reproductive issues, particularly for young women.

Keywords

- Reproductive health;
- Sexual health;
- Health services;
- Youth;
- Nepal

Introduction

Internationally, access to a range of sexual and reproductive health services that safely and effectively satisfy both young men's and women's needs is considered a human right [1], [2] and [3]. Youth have a propensity to engage in risky sexual behaviours. This leaves them vulnerable to Human Immunodeficiency Virus (HIV) infection, sexually transmitted infections (STIs) and unplanned pregnancy [4] and [5]. Risky sexual behaviour arises from a lack of knowledge and experience, as well as curiosity, peer pressure and a sense of lack of control [6] and [7]. Most youth become sexually active before the age of 20 but the majority in low resource settings lack access to accurate and high quality sexual and reproductive health information and services [8], [9] and [10]. This situation arises from a perceived fear of rejection, as well as stigma and discrimination from health care providers and society [11].

The cultural changes that are occurring in many countries in South Asia, including Nepal, mean that young urbanised men and women are caught between modern culture that promotes more open attitudes to sexual exploration prior to marriage and traditional customs that demand conservative sexual behaviour and early marriage. Despite recognition of the

importance of sexual and reproductive health (SRH) to overall health and efforts by the government in Nepal to improve access, SRH services are still largely the domain of married couples. Youth face multiple barriers to good SRH care including geographical isolation and limited resources. They also have to contend with the fear and stigma associated with SRH that is shaped by traditional and cultural beliefs [12] and [13].

The Kathmandu Valley is home to a large number of youth who have migrated from across the country for the employment and education opportunities or who have fled from their homes because of political persecution [14]. Being a densely settled place with a diverse group of inhabitants, youth in these urban areas are at risk of exposure to high risk sexual behaviours. Limited studies confirm that youth in Nepal do not have adequate access to appropriate information and services about SRH but more research is required to inform the effective delivery of such interventions [12], [15] and [16]. This study aimed to assess knowledge, experience and use of SRH services amongst youth living in urban areas of the Kathmandu Valley.

Methods

Study setting and design

The study was conducted in the urban areas of the Kathmandu Valley, comprising all five major cities: Kathmandu, Lalitpur, Bhaktapur, Kirtipur, and Thimi. In this paper we present the cross-sectional household survey information. The data were collected using a two-stage cluster sampling design. In the first stage of sample selection, primary sampling units (clusters or wards) were selected using a probability proportional sampling from each study area. We randomly selected a total of 40 clusters from the three districts' urban areas using household and population information based on the 2011 Population Census developed by the Central Bureau of Statistics. In the second stage, 35 households in each cluster were selected using a systematic sampling technique.

Study population

The sample size for this survey included 720 women and 680 men aged 15–24. This calculation used a 5% margin of error, a 1.6 design effect and 10% non-response rate and was based on the data from the 2011 Nepal Adolescents and Youth Survey 2011 and the Nepal Demographic Health Survey. These surveys respectively found the prevalence of young Nepalese men and women aged 15–24 who had sexual intercourse before the age of 18 to be 38% and 50% [17] and [18].

Questionnaire

The questionnaire consisted of standard items that were adapted from studies that had been carried out and validated in similar settings including questions from the Nepal Demographic Health Surveys [17], [19], [20], [21] and [22]. Some items were modified and added to the questionnaire to suit the context of the study. The questionnaire was finalised after pilot-testing amongst 50 youths outside the study areas.

Two questionnaires were administered: the household questionnaire and the individual questionnaire. We used the household questionnaire to gather basic information about the household and characteristics of all individuals living there. The individual questionnaire was administered to all youth aged 15–24 by trained male and female research assistants with the male research assistants interviewing the male participants and the females by the female participants.

Analysis

Statistical analysis was performed on coded data using the SPSS software Version 16 (SPSS Inc., Chicago, IL, USA). The data were weighted for differential selection probabilities. Comparisons were made using independent sample Chi-square (χ^2) or Fisher's exact test where the frequencies were small. The level of statistical significance was set at a p value of <0.05 .

Ethical considerations

Ethical approval was granted by the University of Sydney's Human Research Ethics Committee and from the Nepal Health Research Council. Informed consent from each study participant was obtained after clear explanation about the purpose of the study. A written consent sheet was prepared for the parents or legal guardians of participants less than 16 years to give their signed consent on behalf of their children. Confidentiality of the information was assured by omitting names of study participants from the questionnaire and respondents were interviewed in a separate room away from other family members to maintain their privacy.

Results

The interviewers visited a total of 7060 households and completed questionnaires from 720 women and 680 men.

Socio-demographic characteristics

In 65% of households no eligible young men or women were identified for study participation. In another 16% of cases occupants of the household did not open the gate and in 15% of households no young person was home at the time of the interviewer's visit. In only four per cent of cases the members of the household refused to participate in the study.

The majority of young men and women were aged 20–24, had never been married, were urban in origin and lived in a nuclear family ([Table 1](#)). Overall half of the participants had been married between the ages 15 and 19, most had the School Leaving Certificate (SLC) or above level of education. Half were Indo-Aryan by ethnicity and most were Hindu. Men were significantly more likely than women not to be married ($p < 0.001$), married at a later age ($p = 0.008$), to have obtained a degree in higher education or to be students ($p < 0.001$).

Table 1.

Socio-demographic characteristics of young people aged 15–24 by sex.

Background characteristics	All (n = 1400)	Male (n = 680)	Female (n = 720)	P value
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	No. (%)	No. (%)	No. (%)	
Age				0.084
15–19	672(48.0)	323(47.5)	349(48.5)	
20–24	728(52.0)	357(52.5)	371(51.5)	
Marital status				<0.001
Never married	1133(80.9)	647(95.1)	486(67.4)	
Married and currently living together	264(18.9)	33(4.9)	231(32.1)	
Separated/widow	3(0.5)	0(0.0)	3(0.2)	
Place of origin				0.133
Rural	669(47.8)	343(50.5)	326(45.3)	
Urban	731(52.2)	337(49.5)	394(54.7)	
Family type				0.204
Nuclear	1109(79.2)	553(81.3)	556(77.2)	
Extended	291(20.8)	127(18.7)	164(22.8)	
Age at first marriage				<0.008
12–14	8(2.9)	0(0.0)	8(3.3)	
15–19	161(60.1)	11(33.8)	150(63.9)	
20–24	99(37.0)	22(66.2)	77(32.9)	
Education				<0.001
No education	11(0.8)	2(0.2)	9(1.2)	
Primary	62(4.5)	13(1.9)	49(6.9)	
Some secondary	279(19.9)	120(17.7)	159(22.1)	
SLC and above	1048(74.8)	545(80.1)	503(69.8)	
Caste/ethnicity				0.115
Dalit/Muslim	61(4.4)	40(5.9)	21(3.0)	
Other Terai castes	33(2.4)	22(3.3)	11(1.5)	
Janajati	686(49.0)	319(47.0)	367(50.9)	
Brahman/Chhetri	620(44.3)	298(43.9)	321(44.6)	
Religion				0.353
Hindu	1151(82.2)	564(82.9)	587(81.5)	
Buddhist	180(12.9)	81(12.0)	99(13.7)	
Christianity	30(2.2)	12(10.8)	19(2.7)	
Kirat	27(1.9)	15(2.3)	12(1.6)	
Islam	11(0.8)	8(1.2)	3(0.4)	

[Table options](#)

Knowledge of sexual and reproductive health

Under half (43%) of youth knew that it is possible for a woman to get pregnant the very first time she has sexual intercourse ([Table 2](#)). However, men were significantly more likely than women to know this (47% vs 39%, $p = 0.018$). Contraceptive knowledge was high but less than half had ever heard of the most reliable long acting reversible methods of contraception: 47% about the implants and 29% about intrauterine devices. Men and women had different ideas about what constituted the most suitable methods for contraception for youth ([Table 2](#)).

Table 2.

Knowledge regarding sexual and reproductive health.

	All (n = 1400) No. (%)	Male (n = 680) No. (%)	Female (n = 720) No. (%)	P value
A woman gets pregnant on the very first time that she has sexual intercourse	560(42.8)	317(46.6)	283(39.3)	<0.018
A woman most likely to get pregnant if she has sexual intercourse half way between her periods	431(32.2)	198(30.7)	233(33.6)	0.304
Ever heard of modern methods of contraceptives				
Condom	1372(98.0)	677(99.6)	695(96.5)	<0.002
Pills	1111(79.3)	541(79.5)	570(79.2)	0.917
Injectable	1034(73.9)	460(67.6)	575(79.8)	<0.001
Implant	658(47.0)	282(41.5)	375(52.1)	<0.003
Male sterilisation	429(30.6)	255(37.5)	174(24.2)	<0.001
Female sterilisation	411(29.4)	228(33.5)	183(25.4)	<0.020
IUCD	401(28.7)	175(25.8)	226(31.4)	0.148
Emergency contraceptive	358(25.6)	165(24.3)	192(26.7)	0.532
Considered most suitable contraceptive for young people ^a				
Condom	1245(90.0)	646(95.7)	599(84.7)	<0.001
Pills	78(5.6)	15(2.2)	63(8.9)	
Injectable	49(3.6)	10(1.6)	39(5.5)	
IUCD	6(0.4)	2(0.3)	4(0.6)	
Natural methods(withdrawal/rhythm)	4(0.3)	1(0.2)	3(0.4)	
Knowledge of legalisation of abortion	753(53.8)	344(50.6)	409(56.8)	<0.045
Understanding of safe sex				
Use condom every time having sex	1298(92.7)	655(96.3)	643(89.4)	<0.001
Avoid multiple sexual partner	975(69.7)	469(69.0)	506(70.3)	0.755
Abstinence	88(6.3)	14(2.1)	72(10.3)	<0.001
Avoid paid sex	42(3.0)	27(4.0)	14(2.0)	0.166
Do not know	21(1.5)	6(0.9)	14(2.0)	0.167
Had heard of infection transmitted through sexual contact	1370(97.9)	675(99.3)	695(96.5)	<0.007
Knowledge of STIs prevention				
Use condoms	1313(93.8)	664(97.7)	648(90.1)	<0.001
Only having one sexual partner	696(49.7)	327(48.1)	369(51.2)	0.356
Avoid unsafe sexual intercourse with multiple partners	623(44.5)	327(48.1)	296(41.1)	0.219
Avoid sexual intercourse	205(14.7)	54(8.0)	151(21.0)	<0.001
Avoid sexual intercourse with commercial sex worker	134(9.6)	90(13.2)	44(6.2)	<0.003
Do not use used syringe	68(4.9)	27(4.0)	41(5.7)	0.283
Do not know	9(0.6)	2(0.3)	7(1.0)	0.194

a

17 respondents are missing(men = 5; women = 12).

[Table options](#)

More than half of youth knew that abortion had been legalised in Nepal, with slightly more women than men knowing this ($p = 0.045$) but the circumstances

allowing access to legal abortion were not well understood. Of those who had stated that abortion was legal roughly one-fourth (26%) knew that the legal limit was 12 weeks and women had a significantly better understanding of this compared to men ($p = 0.011$). Around one to six (17%) stated that abortion is legal for pregnancies up to 18 weeks duration that result from rape or incest. Fourteen percent of men and women were aware that it is legal if a mother's life is in danger and seven percent of them were aware of the availability of abortion on the grounds of fetal abnormality.

Although a large proportion of men and women knew about sexually transmitted infections, men were significantly more aware than women (99% vs 97%; $p = 0.007$). Awareness was greatest for syphilis (reported by almost everyone) followed by HIV, Hepatitis B and Gonorrhoea. Men were significantly more likely than women to have heard about HIV ($p = 0.039$) and Gonorrhoea ($p < 0.001$). Less than a tenth of men (9%) and women (8%) had knowledge of Chlamydia.

Approximately 64% had some knowledge of how a STI may present, naming symptoms such as an ulcer/sore in the genital region, swelling and/or pain/itching in the genitalia and abnormal discharge from the vagina or penis. Men were more aware that STIs could present as a genital ulcer or sore (70% vs 59%, $p = 0.011$) whereas women were significantly more likely to name an abnormal discharge from vagina/penis as a symptom ($p < 0.001$).

Over 90% of young men and women were aware of ways to have safe sex including using condoms, and avoiding having multiple partners. Men were significantly more likely to list condom use as a safe sexual practice ($p < 0.001$) whereas women were more likely to mention abstinence ($p < 0.001$).

Sexual experience and activity

More than one-third (35%) of youth were already sexually active ([Table 3](#)), and in the majority the first sexual experience occurred between the ages of 15 and 19 with no significant difference between men and women. Women were less likely than men to have participated willingly in their first sexual encounter and were also less likely to have used any contraception (10% vs 1.2, $p < 0.001$ and 42% vs 75%, respectively). Condoms were the most common method used as reported by both men (25%) and women (10%).

Table 3.

Sexual experience and activity.

	All (n = 1400)	Male (n = 680)	Female (n = 720)	
Sexual experience and activity	No. (%)	No. (%)	No. (%)	<i>P</i> value
Ever had sexual intercourse	492(35.1)	247(36.3)	245(34.0)	0.571
Considered appropriate age for sexual intercourse(mean age in years)				
Male	21.3	20.5	22.1	<0.001
Female	19.8	19.1	20.4	<0.001
Age at first sexual intercourse(n = 492)				
12–14 years	15(3.2)	8(3.2)	8(3.1)	0.059
15–19 years	333(67.6)	177(71.8)	155(63.4)	
20–24 years	144(29.2)	62(25.0)	82(33.4)	

	All (n = 1400) No. (%)	Male (n = 680) No. (%)	Female (n = 720) No. (%)	P value
Sexual experience and activity				
Circumstance around participation in the first sexual intercourse				
Willingly	457(93.0)	241(97.7)	216(88.3)	<0.001
Unwillingly	28(5.7)	3(1.2)	25(10.2)	
Forced sex	7(1.3)	3(1.1)	4(1.5)	
Ever pregnant ^a	197(40.0)	25(10.1)	172(70.2)	<0.001
Outcomes of pregnancy				
Currently pregnant	35(17.7)	7(27.1)	28(16.3)	<0.034
Live birth	136(69.2)	11(43.6)	125(72.9)	
Abortion	26(13.1)	7(29.3)	18(10.8)	
Contraceptive used at the first sexual intercourse				
Nothing	206(41.9)	63(25.4)	143(58.4)	<0.001
Condom	244(17.5)	171(25.2)	73(10.2)	<0.001
Natural method(withdrawal)	39(2.8)	12(1.8)	27(3.8)	0.121
Pill	12(0.9)	4(0.7)	8(1.1)	0.399
Injectable	11(0.8)	4(0.6)	7(1.0)	0.450
Number of sexual partners in life time				
One	351(71.3)	107(43.1)	244(99.7)	<0.001
Two and above	141(28.7)	141(56.9)	1(0.3)	
Ever had STIs	42(3.0)	8(1.1)	34(4.8)	<0.029

a

For men = Ever got a sexual partner pregnant, For women = Ever been pregnant.

Table options

Men and women's views of the mean ideal age for initiation of sex for men and women are documented in [Table 3](#). Seventy per cent of women reported a pregnancy at some time, with 73% of these women giving a history of a live birth.

Use of health services

The type of SRH services accessed by the youth and the reasons for use are documented in [Table 4](#). In the last 12 months, one third (77%) of the youth had not sought SRH information or services. Compared to women, men were significantly more likely to have sought information or services for contraception ($p = 0.020$) and women for pregnancy check-up ($p < 0.001$). The types of services accessed can be seen in [Table 4](#). When asked about the barriers to SRH care over 90% reported feelings of shame and around half (53.6%) described fear of society and family members, the latter felt more acutely by women than men.

Table 4.

Used of health services.

	All (n = 1400) No. (%)	Male (n = 680) No. (%)	Female (n = 720) No. (%)	P value
Used of services				
Ever visited a health facility or doctor for SRH information or service				

	All (n = 1400) No. (%)	Male (n = 680) No. (%)	Female (n = 720) No. (%)	P value
Used of services				
Yes	317(22.7)	89(13.2)	228(31.6)	<0.001
No	1082(77.3)	590(86.8)	492(68.4)	
Have you been to a SRH service or information in the last 12 months?				
Yes, one time	63(20.0)	21(23.6)	42(18.5)	0.427
Yes, two or more times	147(46.5)	44(49.7)	103(45.2)	
No, not in the last 12 months	107(33.6)	24(26.7)	83(36.3)	
Reasons for health institution visited in the last 12 months				
Contraception	97(6.9)	30(13.6)	67(9.3)	<0.020
Pregnancy check up	55(3.9)	8(1.2) ^b	47(6.5)	<0.001
STI treatment	45(3.2)	24(3.6)	21(2.9)	0.547
Abortion	14(1.0)	5(0.8) ^b	8(1.2)	0.535
Types of health institution visited for SRH service or information in the last visit ^a				
Government sector	118(8.5)	27(3.9)	92(12.7)	<0.001
Nongovernment(NGO) sector	9(0.6)	2(0.3)	7(0.9)	0.137
Private sector(including pharmacy)	109(7.8)	49(7.3)	60(8.3)	0.493
Major barriers preventing young people in seeking SRH				
Shame feeling	1286(91.8)	627(92.1)	659(91.5)	0.732
Fear of society and family members	751(53.6)	305(44.8)	446(62.0)	<0.001
Poor quality care/no youth friendly service	386(27.6)	173(25.5)	213(29.6)	0.406
Lack of education/information	256(18.3)	105(15.4)	151(21.1)	0.089
No free service	226(16.2)	87(12.7)	140(19.4)	0.090
Lack of access/too far	178(12.7)	83(12.2)	95(13.2)	0.753

a
Multiple responses were possible.

b
Visited along with their partner.

[Table options](#)

Discussion

This study sought to assess knowledge, experience and use of SRH services amongst youth living in urban areas of the Kathmandu Valley. We were able to highlight gaps between youth SRH knowledge and practices which leave them vulnerable to sexual ill health. While they had good knowledge of contraceptive methods, use of contraception at the time of first sex did not reflect this. Similarly the low rate of knowledge of Chlamydia indicates a lack of information about clinically significant STIs. Similar results were documented in the Nepal Adolescent and Youth Survey [17].

Our study found that many of the participants had been sexually active. This is in line with a previous study that confirmed that Nepalese people are, despite religious and cultural expectations, changing their sexual behaviour,

norms and independence and engaging in premarital sex at an earlier age [23]. Nepal is similar to many South Asian countries which are in a period of transition. Traditional cultural and religious values are being challenged by the influence of modern western culture [23] and [24].

In 2002, Nepal legalised abortion. The law allows women to make the decision to terminate her pregnancy of 12 weeks or less and to terminate a pregnancy up to 18 weeks gestation if the pregnancy is a result of rape or incest. Pregnancies of any duration can be terminated with the recommendation of an authorised medical practitioner if the life of the mother is at risk, if her physical or mental health is at risk, or if the fetus is deformed. Our study demonstrated a lack of familiarity of abortion and the circumstances under which it is permitted. This needs to be addressed because research has demonstrated that having adequate knowledge about the availability of safer abortion services and its legalisation can increase access to, and utilisation of abortion services amongst young women [6], [25], [26], [27] and [28].

In our study lack of access to services was not often reported as an obstacle to SRH care. In contrast, a sense of shame and fear appear to be significant barriers so although the services exist they are not seen as accessible. Previous studies have acknowledged similarly that the main obstacles to SRH care include entrenched socio-cultural taboos, limited availability of youth friendly services, lack of confidentiality, fear and shame from society and parents, and health professional attitudes and behaviour [27], [29] and [30]. This is particularly true for Nepalese women [31].

Our study, along with other research conducted in Nepal, reveals that youth do not have adequate access to appropriate information and services about sexual and reproductive health and the information they do have does not necessarily translate into uptake of safer sex practice [17] and [23]. According to other studies of youth in Nepal failure to use condoms can be attributed to a range of factors such as lack of supplies, partners not willing to use them, perception that they are associated with diminished pleasure [15], [32] and [33]. The importance of youth friendly services in the uptake and dissemination of sexual and reproductive health information is increasingly recognised [6] and [7].

This study benefited from a large sample size assuring an adequate power to detect statistically significant differences between men and women. It provides useful information that will inform health service planners to design a strategy in addressing the needs of youth for safe sex practices, delaying age at first sex and for the prevention of high risk sexual behaviour in Nepal. This study is limited to youth living in urban areas of the Kathmandu Valley, and therefore precludes generalisation to all youth aged 15–24 in Nepal. The interviews were conducted face-to-face and some covered sensitive and personal information that may have limited honest disclosure. In addition there was the potential for social desirability bias such that young women in particular may have been less willing to disclose pre-marital and unprotected sexual relations. While providing useful information about SRH, the cross sectional nature of the data means that causality cannot be established.

Conclusions

This study shows that majority of youth do not have detailed knowledge about some of the key areas of sexual and reproductive health and thus the quality and method of delivery of this health information needs review. As a result of a lack of understanding, the youth in Nepal take risks with their SRH, with some notable differences between young men and women. The large difference between knowledge and practice may reflect the lack of confidence in SRH and the cultural and religious environment that restricts open expression of sexual issues, particularly for young women. The expansion of youth friendly services that ensures confidentiality has been demonstrated elsewhere to improve access and should be a model supported in Nepal.

Conflict of interest

The authors declare that they have no competing interest.

Authors' contributions

LT was involved in writing the proposal, study design, the recruitment and training of supervisors and data collectors, data analysis and drafting of the manuscript. CR contributed to the designing and writing of project proposal, reviewing and editing drafts of the manuscript, and was involved in the final approval of the paper. KM provided assistance for data analysis and contributed to the writing of the manuscript. KB contributed to the design and writing of the project proposal, and assisted in editing and finalising the drafts of the manuscript. All authors read and approved the final manuscript.

References

1.
 - [\[1\]](#)
 - J. Sundby
 - **Young people's sexual and reproductive health rights**
 - Best Pract Res Clin Obstet Gynaecol, 20 (3) (2006), pp. 355–368
 - [Article](#)
 - | [PDF \(129 K\)](#)
 - | [View Record in Scopus](#)
 - | [Citing articles \(12\)](#)
2.
 - [\[2\]](#)
 - United Nations
 - **Programme of action adopted at the international conference on population and development**
 - Cairo; 5–13 September (1994)
 -
3.
 - [\[3\]](#)
 - United Nations
 - **Fourth world conference on women, action for equity**
 - Development and Peace, Beijing (1995)
 -

4.
 - [\[4\]](#)
 - WHO
 - **Young people and HIV/AIDS: Nepal fact sheet**
 - World Health Organisation Regional Office for South-East Asia, New Delhi, India (2006)
5.
 - [\[5\]](#)
 - UNAIDS
 - **Global report: UNAIDS report on the global AIDS epidemic, 2010**
 - UNAIDS, Geneva (2010)
6.
 - [\[6\]](#)
 - D. Shaw
 - **Access to sexual and reproductive health for young people: bridging the disconnect between rights and reality**
 - Int J Gynaecol Obstet, 106 (2) (2009), pp. 132–136
 - [Article](#)
 - | [PDF \(164 K\)](#)
 - | [CrossRef](#)
 - | [View Record in Scopus](#)
 - | [Citing articles \(20\)](#)
7.
 - [\[7\]](#)
 - WHO
 - **The sexual and reproductive health of young adolescents in developing countries: reviewing the evidence, identifying research gaps, and moving the agenda**
 - Research DoRHa, Geneva (2011)
8.
 - [\[8\]](#)
 - WHO
 - **Report to the World Health Assembly: early marriages, adolescent and young pregnancies**
 - WHO, Geneva (2012)
9.
 - [\[9\]](#)
 - A. Glasier, A.M. Gülmezoglu, G.P. Schmid, C.G. Moreno, P.F.A. Van Look
 - **Sexual and reproductive health: a matter of life and death**
 - Lancet, 368 (9547) (2006), pp. 1595–1607
 - [Article](#)
 - | [PDF \(288 K\)](#)
 - | [View Record in Scopus](#)
 - | [Citing articles \(216\)](#)

10.
 - [\[10\]](#)
 - The Lancet
 - **Sexual and reproductive health and climate change**
 - Lancet, 374 (9694) (2009), p. 949
 - [Article](#)
 - | [PDF \(103 K\)](#)
 - | [View Record in Scopus](#)
 - | [Citing articles \(9\)](#)
11.
 - [\[11\]](#)
 - WHO
 - **Social determinants of sexual and reproductive health: informing future research and programme implementation**
 - World Health Organisation, Geneva, Switzerland (2010)
 -
12.
 - [\[12\]](#)
 - D.R. Acharya, E.R. van Teijlingen, P. Simkhada
 - **Opportunities and challenges in school-based sex and sexual health education in Nepal**
 - Kathmandu Univ Med J (KUMJ), 7 (4) (2009), pp. 445–453
 - [View Record in Scopus](#)
 - | [Citing articles \(8\)](#)
13.
 - [\[13\]](#)
 - P.P. Simkhada, E.R. van Teijlingen, D.R. Acharya, E. Schildbach, P.R. Silwal, J. Shrestha, *et al.*
 - **Sexual and reproductive health of adolescents in rural Nepal: knowledge, attitudes and behaviour**
 - Nepal Popul J, 17 (16) (2012), pp. 3–10
 - [View Record in Scopus](#)
 - | [Citing articles \(1\)](#)
14.
 - [\[14\]](#)
 - B. Kumar
 - **Internal migration in Nepal**
 - Nepal PMo (Ed.), Population and environment: a situation analysis of population, cultivated land and basic crop production in Nepal in 2001, vol. 2, Government of Nepal, Nepal (2003)
 -
15.
 - [\[15\]](#)
 - G. Dahal, M. Hennink, A. Hinde
 - **Risky sexual behaviour among young men in Nepal**
 - Southampton University, England (2005)
 -
- 16.

- [\[16\]](#)
 - S. Pokharel, A. Kulczycki, S. Shakya
 - **School-based sex education in Western Nepal: uncomfortable for both teachers and students**
 - Reprod Health Matters, 14 (28) (2006), pp. 156–161
 - [Article](#)
 - | [PDF \(194 K\)](#)
 - | [CrossRef](#)
 - | [View Record in Scopus](#)
 - | [Citing articles \(23\)](#)
- 17.
- [\[17\]](#)
 - Ministry of Health and Population (MoHP) [Nepal]
 - **Nepal adolescents and youth survey 2010/2011**
 - Ministry of Health and Population, Kathmandu, Nepal (2012)
- 18.
- [\[18\]](#)
 - Ministry of Health and Population (MoHP) [Nepal], New ERA, ICF International Inc
 - **Nepal demographic health survey 2011**
 - Ministry of Health and Population, New ERA and ICF International Inc, Kathmandu, Nepal (2012)
- 19.
- [\[19\]](#)
 - Ministry of Health and Population (MoHP) [Nepal], New ERA, Macro International Inc
 - **Nepal demographic health survey 2006**
 - Ministry of Health and Population, New ERA and Macro International Inc, Kathmandu, Nepal (2007)
- 20.
- [\[20\]](#)
 - J. Pulerwitz, S. Gortmaker, W. DeJong
 - **Measuring sexual relationship power in HIV/STD research**
 - Sex Roles, 42 (7) (2000), pp. 637–660
 - [CrossRef](#)
- 1.
- [\[21\]](#)
 - J. Cleland, R. Ingham, N. Stone
 - **Asking young people about sexual and reproductive behaviours: illustrative core instruments**
 - UNDP/UNFPA/WHO/World Bank Special Programme of Research, Development and Research Training in Human Reproduction, Geneva (2001)
- 2.
- [\[22\]](#)
 - J. Pulerwitz, G. Barker
 - **Measuring attitudes towards gender norms among young men in Brazil- development and psychometric evaluation of the GEM scale**

- Men Masc, 10 (3) (2008), pp. 322–338
 - [View Record in Scopus](#)
 - |
 - [Citing articles \(122\)](#)
- 3.
- [\[23\]](#)
 - N. Khatiwada, P.R. Silwal, R. Bhadra, T.M. Tamang
 - **Sexual and reproductive health of adolescents and youth in Nepal: trends and determinants: further analysis of the 2011 Nepal Demographic and Health Survey**
 - Nepal Ministry of Health and Population, New ERA, and ICF International, Calverton (MD) (2013)
- 4.
- [\[24\]](#)
 - R. Adhikari
 - **Demographic, socio-economic, and cultural factors affecting fertility differentials in Nepal**
 - BMC Pregnancy Childbirth, 10 (1) (2010), p. 19
 - [CrossRef](#)
- 5.
- [\[25\]](#)
 - PATH
 - **Behavior change communication: increasing access to safe abortion in Nepal**
 - (2005)
- 6.
- [\[26\]](#)
 - S.K. Banerjee, K.L. Andersen, J. Warvadekar, E. Pearson
 - **Effectiveness of a behavior change communication intervention to improve knowledge and perceptions about abortion in Bihar and Jharkhand, India**
 - Int Perspect Sex Reprod Health, 39 (3) (2013), pp. 142–151
 - [View Record in Scopus](#)
 - |
 - [Citing articles \(6\)](#)
- 7.
- [\[27\]](#)
 - M. Puri, R. Ingham, Z. Matthews
 - **Factors affecting abortion decisions among young couples in Nepal**
 - J Adolesc Health, 40 (6) (2007), pp. 535–542
 - [Article](#)
 - |
 - [PDF \(197 K\)](#)
 - |
 - [View Record in Scopus](#)
 - |
 - [Citing articles \(13\)](#)
- 8.
- [\[28\]](#)
 - D. Braeken, N. Otoo-Oyortey, G. Serour
 - **Access to sexual and reproductive health care: adolescents and young people**
 - Int J Gynaecol Obstet, 98 (2) (2007), pp. 172–174
 - [Article](#)
 - |

[PDF \(106 K\)](#)

[CrossRef](#)

[View Record in Scopus](#)

Citing articles (6)

9.

- [\[29\]](#)
- P.R. Regmi, P. Simkhada, E.R. Van Teijlingen
- **Sexual and reproductive health status among young people in Nepal: opportunities and barriers for sexual health education and services utilization**
- Kathmandu Univ Med J (KUMJ), 6 (22) (2008), pp. 248–256

○ [View Record in Scopus](#)

Citing articles (18)

10.

- [\[30\]](#)
- K. Regmi
- **Opportunities and challenges of sexual health services among young people: a study in Nepal**
- J Sex Med, 6 (2) (2009), pp. 352–361

○ [Article](#)

[PDF \(107 K\)](#)

[CrossRef](#)

[View Record in Scopus](#)

Citing articles (6)

11.

- [\[31\]](#)
- K. Regmi, R. Smart, J. Kottler
- **Understanding gender and power dynamics within the family: a qualitative study of Nepali women's experience**
- Aust N Z J Fam Ther, 31 (2) (2010), pp. 191–201

○ [CrossRef](#)

[View Record in Scopus](#)

Citing articles (3)

12.

- [\[32\]](#)
- M. Puri, J. Cleland
- **Sexual behavior and perceived risk of HIV/AIDS among young migrant factory workers in Nepal**
- J Adolesc Health, 38 (3) (2006), pp. 237–246

○ [Article](#)

[PDF \(120 K\)](#)

[View Record in Scopus](#)

Citing articles (44)

13.

- [\[33\]](#)
- M. Puri
- **Sexual risk behaviour and risk perception of unwanted pregnancy and sexually transmitted infection among young factor workers in Nepal**

- Center for Research on Environment Health and Population Activities (CREHPA), Kathmandu, Nepal (2002)

-

Corresponding author. Discipline of Obstetrics, Gynaecology and Neonatology, University of Sydney; Royal Prince Alfred Hospital Central, Level 4, Building 63, Missenden Road, Camperdown, 2050 NSW, Australia.