RISKY SEXUAL BEHAVIOUR AMONG YOUNG MEN IN NEPAL

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ABSTRACT

We use the Nepal Adolescents and Young Adults (NAYA) Survey of 2000 to analyse the prevalence of sexual activity and risky sexual behaviour among Nepalese males aged 14-22 years. Risky sexual behaviour is considered to be characterised by having multiple partners, or having one non-regular partner with whom a condom was not used, in the 12 months before the survey. About 9 per cent of the sexually active married men aged 14-22 years, and about 20 per cent of sexually active single men in the same age group, are engaged in risky sexual behaviour. Logistic regression analysis shows that, among married men, those who are better educated and who have better educated fathers are more likely to engage in risky sexual behaviour. Among single men, risky sexual behaviour is especially likely in certain rural districts where it is tolerated by the local culture. The quantitative analysis is supported by qualitative data drawn from focus group interviews.

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Abstract

We use the Nepal Adolescents and Young Adults (NAYA) Survey of 2000 to analyse the prevalence of sexual activity and risky sexual behaviour among Nepalese males aged 14-22 years. Risky sexual behaviour is considered to be characterised by having multiple partners, or having one non-regular partner with whom a condom was not used, in the 12 months before the survey. About 9 per cent of the sexually active married men aged 14-22 years, and about 20 per cent of sexually active single men in the same age group, are engaged in risky sexual behaviour. Logistic regression analysis shows that, among married men, those who are better educated and who have better educated fathers are more likely to engage in risky sexual behaviour. Among single men, risky sexual behaviour is especially likely in certain rural districts where it is tolerated by the local culture. The quantitative analysis is supported by qualitative data drawn from focus group interviews.

1. Introduction

The risky sexual behaviour of men is reported to be the main reason for the rapid spread of sexually transmitted infections, including HIV/AIDS, in Africa and Asia. Whether or not the sexual behaviour of men is risky depends on the number and nature of their partnerships, the sexual acts they perform and their sexual orientation (Cohen and Trussell, 1996; Dixon-Mueller, 1993). However, sexual behaviour is also influenced by a host of social, cultural and economic factors (Kippax and Crawford, 1993; Ingham and van Zessen, 1997; Ingham *et al*., 1992).

Evidence from the literature suggests that the age at sexual debut is lower among males than females, and that young men are especially likely to report multiple sexual partners and to enjoy engaging in unprotected sex (World Health Organisation (WHO) 2001; Hulton *et al*., 2000). The modern tendency to delay marriage in order to pursue educational or employment goals leads to increased opportunities for young people to have premarital sexual relations or involvement with sex workers. Mutual trust between unmarried partners, drug use and alcohol intake may lead couples to initiate unsafe sexual behaviour (WHO, 2001). Although knowledge of HIV/AIDS is increasing, not least because of dissemination through such media as radio and television programmes, greater knowledge is not always translated into safe sexual practices (Cleland, 1995).

This paper studies the prevalence of, and factors associated with, risky sexual behaviour among young men (aged 14-22 years) in Nepal. Nepalese people, especially young people, are facing serious health problems due to the rapidly spreading heterosexual transmission of infections (Ministry of Health, 2000). The National Centre for AIDS and Sexually Transmitted Disease Control of the Ministry of Health (NCAS) recently reported that the HIV epidemic is expanding more rapidly than previously estimated. As of April 2004, NCAS estimates that 2,638 people are infected with the HIV virus, of which three quarters are men and the majority (over 65 per cent) are young people aged 14-29 years. This is likely to be an underestimation of the problem, given the hidden nature of the virus, the long latency period, the lack of proper diagnosis and the likelihood of underreporting (Suvedi *et al.*, 1994). Although HIV prevalence in the general population is low at around 0.5 per cent, Nepal has entered a ‘concentrated epidemic’ phase because the prevalence consistently exceeds 5 per

cent in one or more sub-groups (for example 17.3 per cent among sex workers in Kathmandu, and 40.4 per cent among intravenous drug users nationwide).

In the absence of effective interventions, even a 'low to concentrated growth scenario' would make AIDS the leading cause of death in the adult population aged 15-49 years over the coming years (MEH Consultants (P) Ltd. and Research Group for Health Economics and Development, 2000). Evidence increasingly suggests that the rapid spread of infections in Nepal is the outcome of heterosexual relations with sex workers and non-regular and/or multiple sex partners (Tamang *et* al., 2001).

Though there are strong cultural taboos against premarital and extramarital sexual relations, the engagement of young men in risky sexual behaviour (such as having multiple partners and non-use of condoms) is encouraged by the existence of an illegal sex trade involving Nepalese sex workers. It is estimated that several thousand Nepalese girls and women are working in sex industries in the major Indian cities. Once they are diagnosed with HIV/AIDS, they are forced to return to Nepal. Due to the social and economic environment in their natal villages and also because rehabilitation centres are few, they have no choice but to continue their trade (National Planning Commission/ UNICEF, 1996). In addition, young migrant workers from the far western region of Nepal, particularly those who go to work in Maharastra, India, are becoming infected with HIV (Kathmandu Post, 8 June 2002) since their new temporary environment, far from their usual place of residence, may influence their sexual behaviour. These infected workers then transfer the virus to their spouses or partners who are unaware of their risk.

Although local cultural taboos restrict open communication about sex and sexual health in Nepal, young people are inclined to engage in risky behaviour due to the open culture of western modernisation through the globalisation of information. Most young people have little factual information or guidance about reproductive health or access to health care (Bhatta *et al*., 1994). The International Conference on Population and Development (ICPD) Program of Action emphasises that sexually active young people in South Asia are increasingly at a high risk of contracting and transmitting sexually transmitted diseases as they are typically poorly informed about how to protect themselves (United Nations, 1995).

The situation is exacerbated by moral, cultural or religious restrictions on the dissemination of information related to safe sexual and reproductive health behaviour.

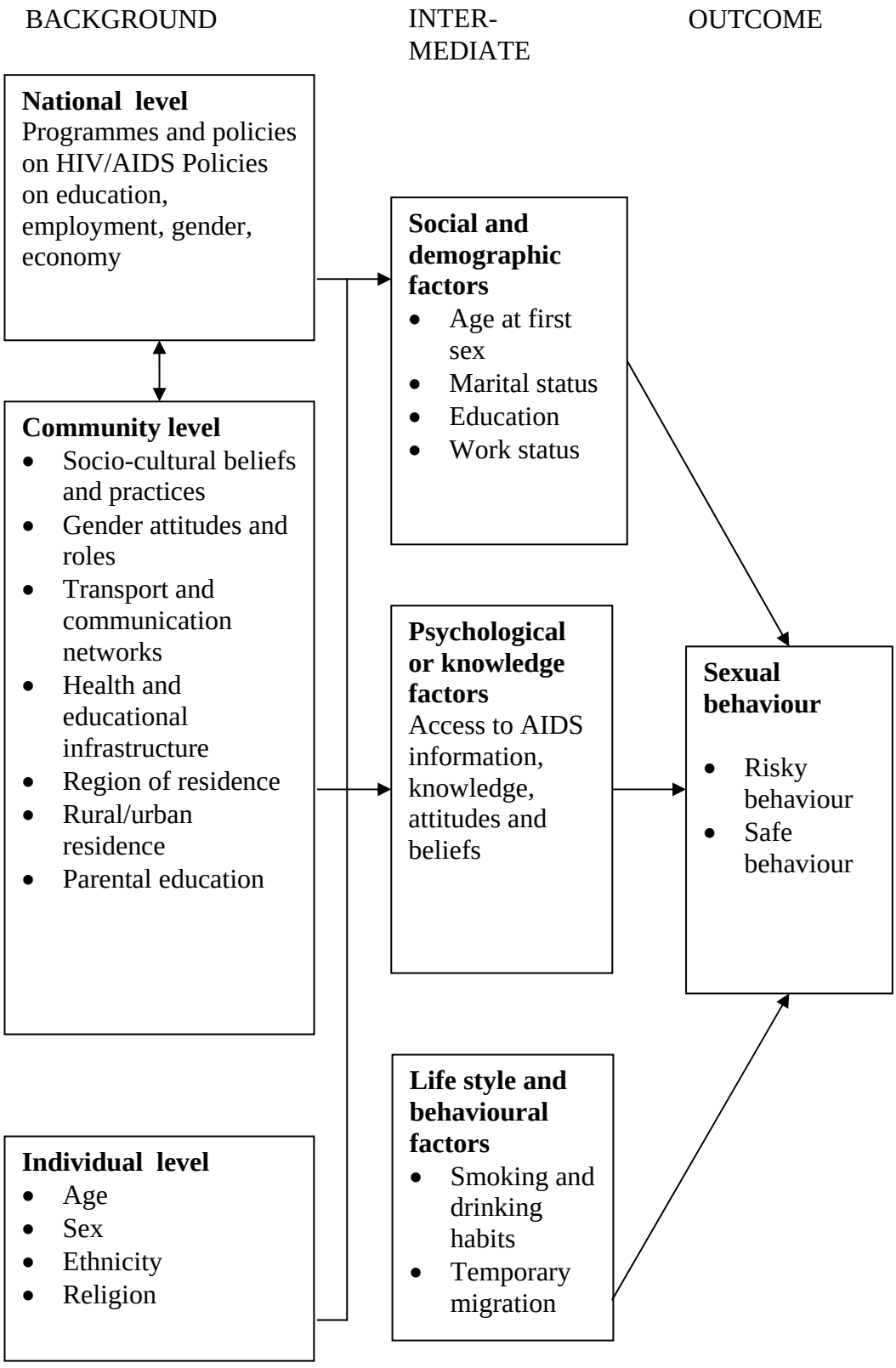
As there is no AIDS vaccine on the horizon in the short-term, behavioural change is only way to limit transmission of the virus (Coates and Collins, 1998). Effective action to change people's risky behaviour needs to be culturally appropriate, in particular to take account of the different gender roles in certain cultures that significantly influence their sexual behaviour (Verma, 1997). The value system in a society provides the context within which behaviour is shaped. In view of the gender asymmetry and patriarchal culture prevalent in Nepalese society, men have a dominant role in the decisions related to sexual matters and reproduction (Dahal, 1996). Men's risky sexual behaviour is therefore a prime cause of virus transmission for themselves and to women (MEH Consultants (P) Ltd. and Research Group for Health Economics and Development, 2000). However, very little is known about how risky the sexual behaviour of young Nepalese men is and, to the extent that it is risky, what factors are associated with risky behaviour. Improving our understanding of these questions would help to underpin better policy, which should help speed progress towards meeting the nation's public health objectives as expressed by the government in line with the ICPD Program of Action. This paper thus aims to explore the extent of, and factors associated with, sexual behaviour among a large-scale sample of young Nepalese men aged 14-22 years.

2. Analytical framework

Our analytical framework (Figure 1) identifies sexual behaviour as an outcome variable which is influenced by a range of background factors at the national, community and individual levels, acting through intermediate demographic, psychological and lifestyle factors.

The government's national level commitment to preventive policies on HIV/AIDS influences individuals' access to information, education and services. The national policy also influences the education and health infrastructure and the availability of community level health and education services. The processes of distributing economic resources, and facilities in transportation and are other community-level factors which may ultimately affect sexual behaviour. Also, a community's cultural beliefs, including ideologies of masculinity

Figure 1. An analytical framework for the study of men's sexual behaviour in Nepal



Source: Akwara *et al.* (2003) p. 389.

and femininity, may affect individuals' identity and self-concept which can, in turn, influence sexual decision making (Gage, 1998). The socialisation of young men differs according to where they live because cultural norms and the availability of health facilities vary from place to place (for example between rural and urban or hill and mountain areas). The education of parents and whether many members in the community are educated also influences gender roles and shapes the sexual attitudes and behaviour of young men. Interaction between individuals may not result in safe sexual outcomes if unequal gender relations exist in the community (Blanc, 2001; Caldwell and Caldwell, 1993).

Individual level background factors such as age, sex, ethnicity and religion may have an effect on sexual behaviour. Ethnicity and religion can influence sexual behaviour through cultural beliefs and practices, operating thorough intermediate factors such as the age at first sexual intercourse, marital status, lifestyle patterns and access to information and services. For example, Brahmin and Chhetri in Hindu culture believe that abstinence from sex is considered a virtue and premarital and extramarital sex is strictly prohibited. Overindulgence in sexual relations, even between husband and wife, in this culture is considered to be a sin owing to a belief that semen is a source of physical and spiritual strength which comes from food by successive transformations through blood, fat, bone and marrow (Nag, 1995). However, many young Hindu men have gone beyond these cultural norms to engage in premarital and even extramarital unsafe sexual activities (WHO, 2001).

This introductory discussion has raised sexual and reproductive health as an important issue. The analytical framework provides a theoretical background and indicates potential linkages between sexual behaviour and background factors at the national, community and individual levels, as well as intermediate factors. The discussion below will describe the context of Nepalese society, the role of men and government policies, and present a brief review of research on the subject previously undertaken in Nepal.

3. Context

In this section, we elaborate upon the Nepalese context, focusing on the patriarchal nature of Nepalese society, government policy and the findings of the limited amount of previous research into the sexual behaviour of young men.

Patriarchy. Though Nepal is culturally diverse, the majority of communities are patriarchal. Men dominate almost all household decision-making (Dahal, 1999). This situation is reinforced by the legal system. For example, if a woman remains infertile for ten years of her marriage, her husband is legally allowed to marry another woman. Similarly, a girl does not have the same property rights as her male siblings. Young men perceive this inequality and it strongly influences their sexual attitudes and behaviour. Though there are social taboos for both sexes relating to sexuality, the restrictions on males are fewer than those on females. For example girls' virginity before marriage in Indo-Aryan (for example Brahmin/Chhetri) culture is highly valued as a form of purity of the female body, but this does not apply for boys (Dahal, 1996). Marriage is a social contract between two clans rather than the personal affair of the bride and groom. In the Tibeto-Burman (for example, Rai, Limbu, Gurung Magar, and Sherpa) groups the choice of marriage partners is far more flexible with bride and groom free to decide about their life partner (Dahal, 1996). Overall, though, most of the population possesses patriarchal value systems that accord overwhelming dominance to males.

Government policy. During the last 35 years population policies in Nepal have focussed on the provision of basic health services with an emphasis on primary health care including family planning (Ministry of Health, 2000). Fertility control was one of the prime goals of the government-supported family planning program, which focussed primarily on married couples. Though married women were perhaps the main targets of the programme, married men having two or more children (especially sons) were forced to have vasectomies during the late 1970s and the early 1980s (Ministry of Health, 2001). However, adolescent and young men, particularly those who were unmarried, were virtually ignored (Ministry of Health, 2000). More recently, the government of Nepal has become a co-signatory to the 1994 Program of Action of the ICPD, which has focussed attention on the reproductive health status of the whole population, including adolescents and young men.

Following the ICPD Program of Action (United Nations, 1994), the Nepal Ministry of Health formulated the National Reproductive Health Strategy in 1998. Two years later, the Ministry of Health formulated a new National Adolescent Health and Development Strategy in order to provide guidelines for policy makers, service providers and various other governmental

and non-governmental agencies working in the field of reproductive health. A regional conference on 'Youth across Asia', held in Kathmandu in 1997, endorsed the need to focus on adolescents and youth in Nepal. In its Ninth Development Plan (1997-2002) the government also documented its support for programs targeted at adolescents and young adults. However, the lack of data on sexual and reproductive health among young men has hitherto inhibited the design of appropriate policies and programs (Ministry of Health, 2000).

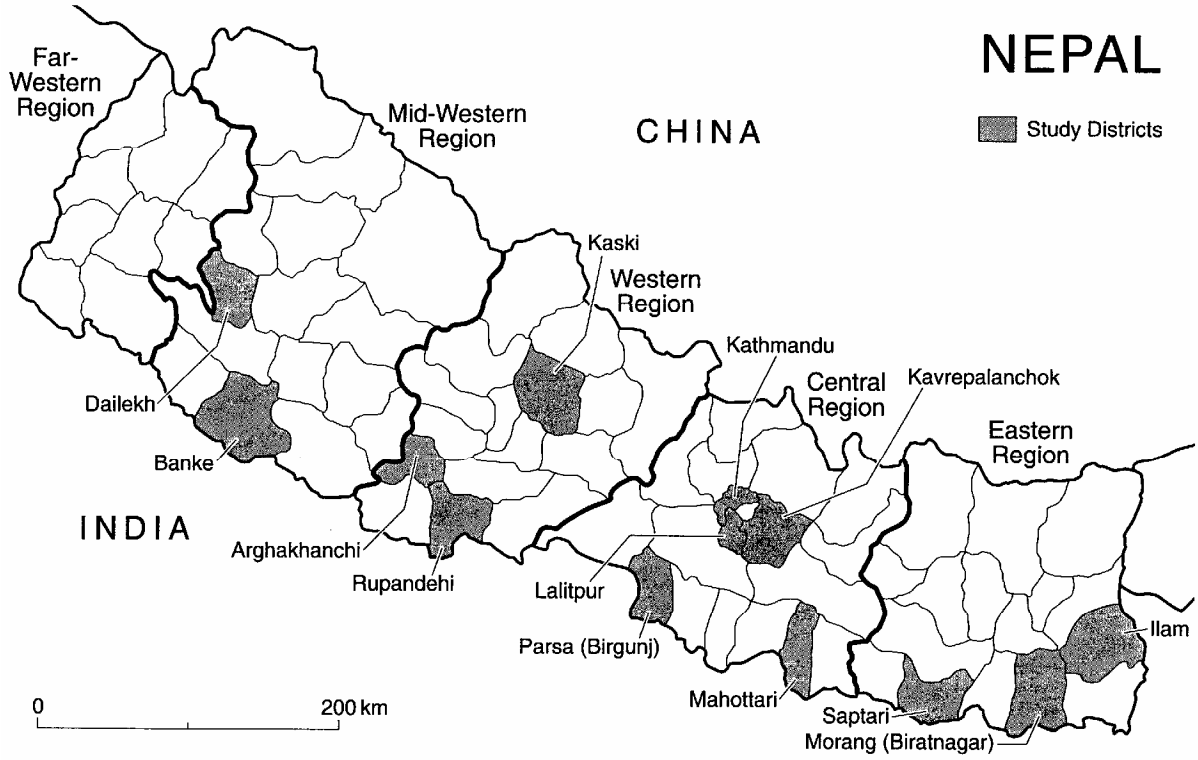
Previous research. There is very little published literature on the sexual behaviour and reproductive health of young men in Nepal. An early study revealed that a quarter of males were engaged in premarital or extramarital sex (Gurubacharya and Suvedi, 1994). A second study which interviewed 74 college-level male students in Kathmandu found that 10 per cent of these men visited female commercial sex workers (Shrestha and Gurubacharya, 1996). A study of military recruits reported that 8 per cent of men had sexual partners in the preceding three months (Upadhyay, 1998). Since no details of sample size and population characteristics were provided in the first and third of these studies, and none in the second one apart from the sample size, it is difficult to assess their comparability and quality (Furber *et al.*, 2002). In addition, sexual behaviour among students and the military may not be representative of that among the young male population as a whole.

A survey conducted in 1997 among 500 resident and 300 non-resident men in five towns bordering India pointed out that migrant males who were unmarried and under 25 years old were much more likely to have sex with prostitutes than resident young males (Tamang *et al.*, 2001). Similarly, Puri (2002) studied the sexual behaviour of young factory workers in Kathmandu valley and found that early sexual experimentation, multiple partners, and low and irregular use of condoms were common among these workers. Despite the high-risk behaviour of these young people, few considered themselves to be at risk of getting HIV/AIDS, other sexually transmitted infections or an undesired pregnancy. In a comparative study on substance use and pre-marital sex among adolescents (15-19), Choe *et al.* (2004) found that protective childhood family characteristics such as growing up with two parents, not having frequent quarrels in the family and having close relationships with parents tend to lower the probability of early initiation of substance use and premarital sex.

4. Data and methods

Data. This study uses both quantitative and qualitative data. The quantitative data are from the Nepal Adolescents and Young Adults (NAYA) survey conducted in July and August 2000 (Thapa *et al.*, 2002). This is the first comprehensive survey to focus on adolescents and young adults in Nepal. The survey interviewed 7,977 single and ever-married males and females aged 14-22 years. A total of 3,802 males were interviewed, of whom 613 were married. The survey adopted a two-stage sample design, the first stage involved selecting 13 districts within Nepal (eight rural and five urban) (Figure 2). The second stage involved selecting a number of clusters within each of the 13 districts. The NAYA does not cover the mountain ecological region that is sparsely populated.

Figure 2. Map of Nepal showing the districts surveyed in the Nepal Adolescents and Young Adults Survey



The NAYA questionnaire consisted of 13 modules: respondents' background; residential history; family characteristics; puberty and menstruation; friendship, love and marriage;

sexuality; pregnancy and childbearing; knowledge and practice of family planning; sexually transmitted infections including HIV/AIDS; gender roles; mass media exposure; awareness of girl-trafficking; and miscellaneous topics, including smoking, drug use and alcohol use. This study is based on the sexuality module.

The qualitative data used in this study were collected through focus group discussions (FGDs) during April and May 2004. The purpose of the FGDs was to collect information to help explain the findings from analysis of the NAYA data and identify the context of sexual behaviour and contraceptive use amongst the target population. Four FGDs were conducted with unmarried males in the 'hill' ecological region aged 14-22 years in order to discuss sexual behaviour. The groups had between six and nine participants. The research questions were guided by the quantitative findings of the NAYA survey. Focus group participants were thus selected from both rural and urban areas, using screening forms to identify their eligibility and to stratify the groups. The main additional selection criteria for participants were age and marital status. The focus groups were conducted at a health posts, village development committee buildings and other public buildings. The discussion topics included the marriage process, sexual behaviour, condom use and the use of reproductive health services. The FGDs were tape recorded, transcribed and translated from Nepali to English. Informed consent from respondents was obtained for tape recording and confidentiality was assured. In addition to the focus group discussions, an in-depth interview was conducted with a local key informant. This interview was conducted to help assess broader community views regarding the issues discussed in the focus group.

The quality of the translated transcripts was verified by another researcher who randomly selected sections of text for translation and transcription quality. Thematic analysis, whereby key themes were identified from the textual data, was used to analyse the data. This involved reading the transcripts of discussions to identify the major themes and concepts. These themes were then used to label (or code) the data for more detailed analysis. Some quotations to illustrate the key themes were also used.

The definition of 'risky sexual behaviour'. Defining risky sexual behaviour is essential in order to communicate and disseminate information effectively as well as to develop specific actions and programs aimed at the promotion of sexual and reproductive health (Lundgren,

2000). Dixon-Mueller defines sexual behaviour as 'actions that are empirically observable (at least in principle); that is, what people do sexually with others or themselves, how they present themselves sexually and how they talk and act' (Dixon-Muller, 1993: 275). Some individuals may engage in various forms of risky behaviour and some may engage in one exclusive form. For example people may engage in heterosexual, homosexual and bisexual orientations. However, surveys (including the NAYA) conducted on sexual behaviour in Nepal assume that people mostly engage in heterosexual partnerships. This paper therefore focuses on these.

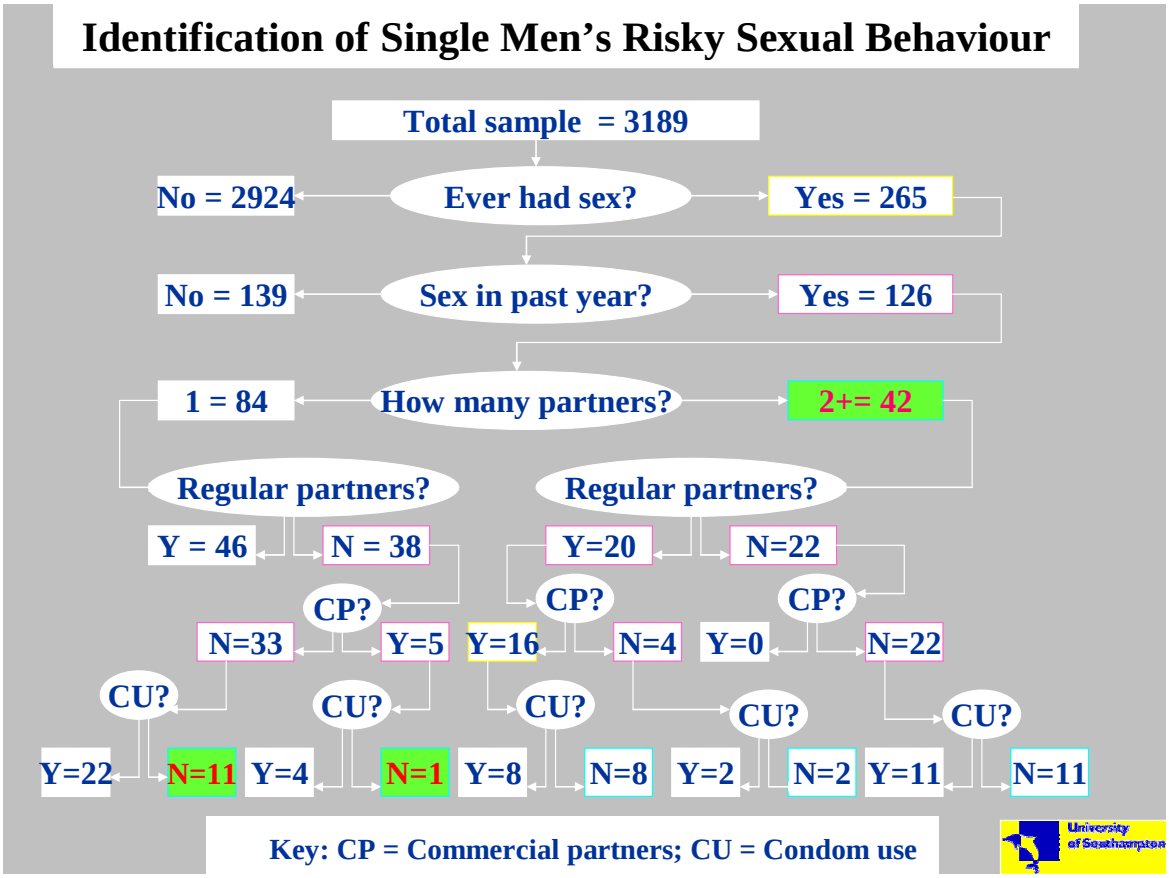
In 2000 the Joint United Nations Programme on HIV/AIDS (UNAIDS) proposed a new definition of risky sexual behaviour. Before this, the definition of the World Health Organization/Global Programme on AIDS, prevention indicator 4 (PI4), was in common use (Joint United Nations Programme on HIV/AIDS, 2000). PI4 used a time-based definition of regular and non-regular partners. The modified measurement tools comprise UNAIDS general population surveys, Demographic Health Surveys (DHS-AIDS module) and Family Health International (FHI) Behavioural Surveillance Surveys. The NAYA 2000 survey used in this study is the first of its kind designed by FHI. It identifies risky sexual behaviour in a number of ways by asking about age at sexual debut, whether a respondent had ever had sexual intercourse, and whether a respondent had had sexual intercourse in the last 12 months. In relation to the year preceding the survey, the NAYA asked about regular and non-regular sexual partnerships, the number of sexual partners, and sexual activity with commercial partners. Finally respondents were asked whether they used a condom the last time they had sexual intercourse.

In order to define the variable 'risky sexual behaviour' used in this paper, we limit the reference period to the last 12 months. Although the lifetime risk of people may not be reflected by this short span of time, a 12-month reference period is used by the Joint United Nations Programme on HIV/AIDS (2000) to minimise recall errors inherent in reporting of past events. The complex issues are how to identify the 'at risk' individuals among the sexually active respondents using the questions given above, and how to work out the number of people engaged in risky sexual behaviour without any double counting.

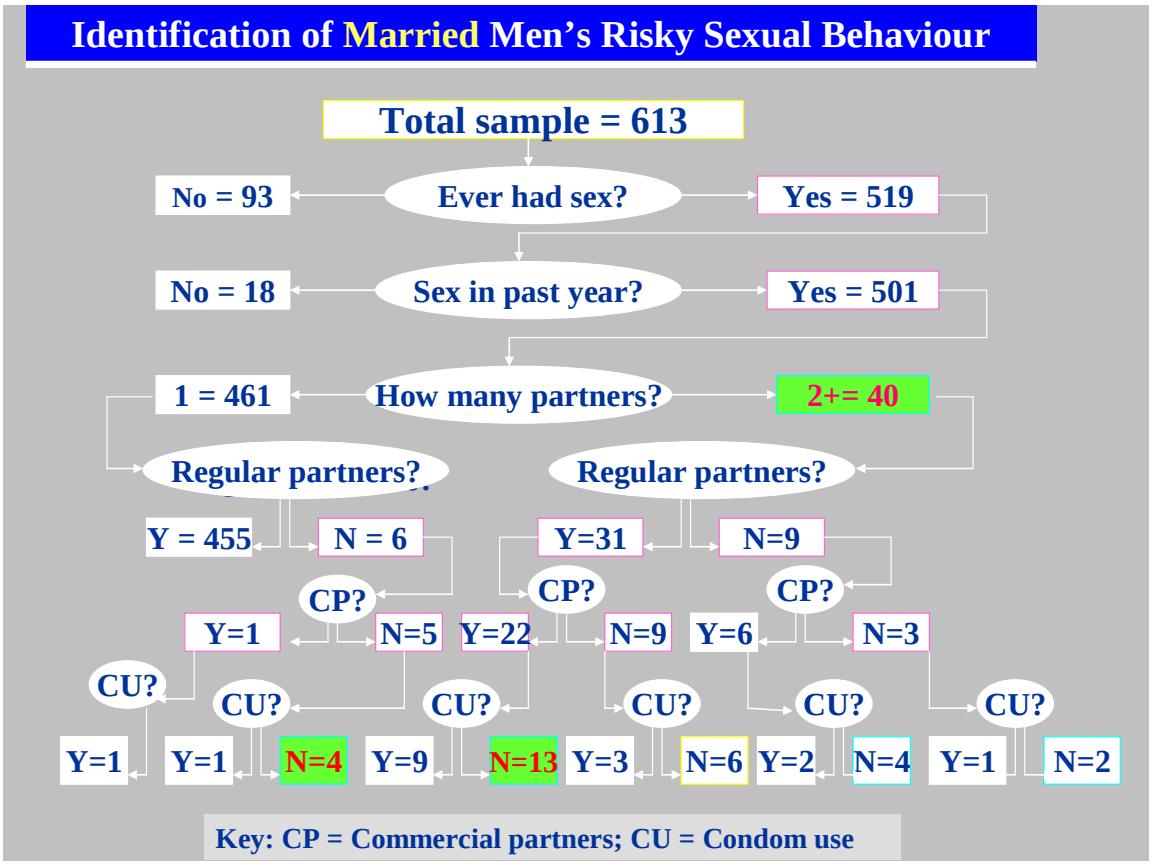
To resolve these issues, we present two flow diagrams for single and married young males (Figure 3 (a) and (b)). In order to construct these flow diagrams, the responses to the NAYA questions related to sexual behaviour: *Have you ever had sexual intercourse? Did you have*

Figure 3. Flow charts illustration the identification of risky sexual behaviour among men in the Nepal Adolescents and Young Adults Survey: (a) Single men (b) Married men

(a)



(b)



Notes: CP – commercial partners; CU – condom use.

Source: Nepal Adolescents and Young Adults Survey, 2000.

sexual intercourse at any time in the past year? How many partners did you have sex with in past year? Was/were this/these partner(s) regular? and *Was/were this/these partner(s) commercial?* were categorised into codes (1 for 'Yes' and 0 for 'No' except for *How many different partners have you had in the past year?* which was coded 1 if respondents reported 'two or more' partners/spouses and 0 for 'only one'). The responses to the question, *Did you use condoms the last time you had sex?* were coded differently (0 for 'Yes' and 1 for 'No'), so that for all the variables, 1 indicates risky behaviour and 0 safer behaviour.

The definition of risky sexual behaviour used in the paper essentially ignores the fact of whether or not a man is married. Although premarital sex is strictly prohibited by Nepalese cultural norms, so that having single or multiple partners before marriage is culturally taboo,

so far as contracting diseases is concerned, a single, regular partner is considered non-risky by UNAIDS, whether or not he or she is a spouse. It follows that unmarried men who had only one partner during the last 12 months are only considered to have engaged in risky sexual behaviour if this partner was 'irregular', commercial or casual. Further, the sexual behaviour even of men who had a single 'irregular', commercial or casual partner is not considered to have been risky if the man reported having used a condom the last time he had sexual intercourse. There is evidence from studies elsewhere in the world that condom use (or not) at last coitus tends to reflect a pattern of consistent use (or non-use) of condoms in similar situations over a period of time (Lagarde *et al.*, 2001; Myer *et al.*, 2002). Thus condom use is important in the definition among men who had only one non-regular partner in the last 12 months.

All men with two or more partners in the last 12 months are regarded as engaging in risky behaviour. This study, therefore, defines those engaging in risky sexual behaviour to be all men with multiple partners in the last 12 months, plus all men with one partner which was non-regular and with which the man did not use a condom.

Since the number of sexual partners in the last 12 months is an indirect measure of the frequency of sexual intercourse and exposure to the risk of infections, the NAYA survey did not collect information on the number and type of lifetime sexual partners that could have been used as a proxy of level of lifetime risk of exposure to the infection through sexual intercourse. The question asked was: *How many different sexual partners have you had in the past year?* This question is limited because it considers only recent sexual behaviour, thereby ignoring what may have transpired since first sexual intercourse. An individual may have had only one partner in the recent past, though lifetime risk could be high. This limitation of our definition of risky sexual behaviour is somewhat reduced by the fact that the men in our sample are mainly in their teens, so that for many of them, the last 12 months constitutes a substantial proportion of their sexually active lives.

5. Descriptive analysis

Characteristics of all respondents. We begin by presenting the social and demographic characteristics of single and married respondents (Table 1). The NAYA survey over-

sampled urban areas, so we present the distributions based on both weighted and un-weighted data. The characteristics we consider include the respondent's age, ecological region, urban/rural residence, the education of the respondent and his father and mother, occupation, religion, ethnicity, and whether the respondent had listened to reproductive health programmes on the radio. The percentage distributions for both unmarried and married men show that the weights make relatively little difference for all characteristics other than urban/rural residence.

Unsurprisingly, unmarried men are younger than married men. Even with the un-weighted data, the majority of both single and married men are from rural areas, but the weighted distribution shows a very small proportion of urban residents. Concerning respondents' education, single men have higher levels of education than married men. More than twice the proportion of single compared with married men have achieved 'high school plus' education. The proportion of married men who had no education is more than twice that of single men. Most of the single respondents were students whereas 30-40 per cent of the married respondents were involved in non-agricultural occupations. The vast majority of respondents are Hindus. The largest percentages of single men are from the Brahmin/Chhetri ethnic group while the largest percentage of married respondents is from *Terai* caste. About three quarters of single and two thirds of married men have heard reproductive health programmes on the radio (these include programmes on pregnancy and family planning, condoms, HIV/AIDS and other sexually transmitted infections, domestic violence, and a drama serial).

Characteristics of sexually active respondents. Next we turn to the distribution of sexually active men (defined as those who have ever had sexual intercourse) according to the same background characteristics (Table 2). For married men, the pattern is similar to that of all men. For single men, however, there are some differences. The age group 14-16 years represents the highest proportion of all single respondents, whereas it represents the smallest proportion of the sexually active ones. The mothers of sexually active single men are not as well educated as those of all single men. Finally, a considerably lower proportion of sexually active single men described themselves as 'students' than did all single men.

Table 1. Single and married males according to selected background characteristics: all respondents

Characteristics	All male respondents					
	Single			Married		
	Unweighted		Weighted	Unweighted		Weighted
	%	N	%	%	N	%
Respondent's age (years)						
14-16	46.2	1,473	51.5	10.8	66	9.7
17-19	35.7	1,140	33.2	36.2	222	37.5
20-22	18.1	576	15.3	53.0	325	52.8
Ecological region						
Hill	55.8	1,781	54.7	26.9	165	25.5
Terai	44.2	1,408	45.3	73.1	448	74.5
Residence						
Urban	40.1	1,278	6.8	16.5	101	1.7
Rural	59.9	1,911	93.2	83.5	512	98.3
Respondent's education						
None	5.4	174	7.8	17.9	110	21.0
Primary	19.3	616	22.4	35.9	210	34.1
Secondary	28.0	892	29.7	23.7	145	22.3
High School plus	47.3	1,507	40.1	22.5	138	22.6
Father's education						
None	28.1	895	33.7	57.4	352	58.9
Literate	20.3	647	21.9	20.1	123	21.3
Primary/Secondary	22.2	709	23.7	17.1	105	16.0
High school plus	29.4	938	20.7	5.4	33	3.8
Mother's education						
None	60.1	1,918	71.1	91.7	562	93.1
Literate	18.3	585	16.7	6.0	37	5.5
Primary/Secondary	11.0	352	7.7	1.8	11	1.2
High school plus	10.5	334	4.5	0.5	3	0.2
Respondent's occupation						
Agriculture	10.5	336	16.0	31.5	193	37.4
Non-agriculture	18.3	585	13.8	41.8	256	35.1
No usual occupation	8.5	271	10.3	13.9	85	15.4
Students	62.6	1,997	59.9	12.9	79	12.1
Religion						
Hindu	85.6	2,729	85.6	86.6	531	89.1
Buddhist	7.7	246	8.1	3.3	20	3.6
Muslim	4.3	136	3.7	8.5	52	5.9
Others	2.4	78	2.6	1.6	10	1.4
Ethnicity						
Brahmin/Chhetri	37.2	1,187	35.3	17.6	108	16.7
Mongoloid	27.8	886	23.3	9.0	55	9.1
Terai caste	29.9	952	31.9	62.6	384	59.6
Occupational	5.1	164	9.5	10.8	66	14.6
Listened to reproductive health programmes on the radio						
None	24.4	779	27.4	40.5	248	41.4
Some	52.1	1,663	46.9	43.5	267	42.8
All	23.1	737	25.7	16.0	98	15.8
Total	100.0	3,189	100.0	100.0	613	100.0

Source: Nepal Adolescents and Young Adults Survey, 2000.

Table 2. Sexually active single and married males by selected background characteristics

Characteristics	Sexually active respondents					
	Single			Married		
	Unweighted		Weighted	Unweighted		Weighted
	%	N	%	%	N	%
Respondent's age (years)						
14-16	19.6	52	25.6	5.8	30	5.3
17-19	43.8	116	44.0	34.3	178	35.3
20-22	36.6	97	30.5	59.9	311	59.4
Ecological region						
Hill	51.3	136	48.0	31.2	162	30.3
Terai	48.7	129	52.0	68.8	357	69.7
Residence						
Urban	34.0	90	7.5	18.3	95	2.1
Rural	66.0	175	92.5	81.7	424	97.9
Respondent's education						
None	6.4	17	7.5	17.7	92	20.8
Primary	19.2	51	22.7	35.3	185	34.5
Secondary	20.4	54	23.6	23.7	123	22.1
High School plus	54.0	143	46.2	23.3	121	22.7
Father's education						
None	30.2	80	35.8	56.1	291	56.6
Literate	20.4	54	23.1	21.0	109	23.4
Primary/Secondary	26.4	70	25.7	17.0	88	15.6
High school plus	23.0	61	15.5	6.0	31	4.3
Mother's education						
None	65.7	174	78.4	90.8	471	92.3
Literate	19.2	51	13.7	6.6	34	6.1
Primary/Secondary	8.3	22	5.1	2.1	11	1.4
High school plus	6.8	18	2.8	0.6	3	0.3
Respondent's occupation						
Agriculture	14.0	37	21.2	33.5	174	40.2
Non-agriculture	32.8	87	28.7	44.1	229	36.5
No usual occupation	10.2	27	9.3	12.5	65	13.9
Students	43.0	114	40.8	9.8	51	9.4
Religion						
Hindu	84.5	224	85.5	86.3	448	89.6
Buddhist	8.3	22	6.7	3.9	20	4.3
Muslim	4.9	13	5.8	7.9	41	4.8
Others	2.3	6	2.0	1.9	10	1.3
Ethnicity						
Brahmin/Chhetri	37.7	100	35.8	19.8	103	19.8
Mongoloid	22.3	59	18.3	10.4	54	9.7
Terai caste	34.3	91	40.5	58.8	305	61.1
Occupational	5.7	15	5.4	11.0	57	9.5
Listened to reproductive health programmes on the radio						
None	20.3	54	22.5	38.0	197	39.8
Some	48.0	127	41.1	44.5	231	43.1
All	31.7	84	36.4	17.5	91	17.1
Total	100.0	265	100.0	100.0	519	100.0

Source: Nepal Adolescents and Young Adults Survey, 2000.

Table 3 shows the proportions of single and married respondents who were sexually active according to background characteristics. Overall, 8 per cent of single respondents and 85 per cent of married respondents are sexually active. Among married men the proportion sexually active varies little except by age, occupation and ethnicity. Fewer than half of married men in the 14-16 year age group are sexually active compared with four fifths in the 17-19 year age group and 96 per cent in the 20-22 year age-group. Married students have relatively low rates of sexual activity. Compared with other ethnic groups, married men from the *Terai* caste have lower rates of sexual activity. A possible reason for this is that they include a relatively high proportion of young married men.

Among single men, the proportion of respondents who are sexually active varies by age group, respondents' occupation, respondents' mothers' education and whether respondents have heard reproductive health programmes on radio. As with married men, the proportion sexually active increases from the younger to older age groups. Single men with high levels of education (or who are described as 'students') have low rates of sexual activity. Their sexual activity also varies inversely with their mother's educational level. Listening to 'all' reproductive health programmes on the radio is associated with higher rates of sexual activity among single men, as is being engaged in a 'non-agricultural' occupation.

Factors associated with risky sexual behaviour among sexually active respondents.
Table 4 examines the proportions of all single and married sexually active men who were engaging in risky sexual behaviour during the 12 months before the survey, according to the same set of background characteristics used in Tables 1-3. About one in five sexually active single men, and just under one in eleven sexually active married men exhibited risky sexual behaviour.

Sexually active single men aged 14-16 years are especially likely to be engaged in risky sexual behaviour. More than 23 per cent of sexually active single respondents of this age group were involved in risky sex. Single men in rural areas were more likely to have engaged in risky sexual activity (24 per cent) than their counterparts in urban areas (13 per cent). Other subgroups of single men which are especially likely to have engaged in risky

Table 3. Sexually active young men as a percentage of all single and married respondents by selected background characteristics (un-weighted)

Characteristics	Single			Married		
	Total number of men	Number sexually active	Percent-age sexually active	Total number of men	Number sexually active	Percent-age sexually active
Respondent's age (years)						
14-16	1,473	52	3.5	66	30	45.5
17-19	1,140	116	10.2	222	178	80.2
20-22	576	97	16.8	325	311	95.7
Ecological region						
Hill	1,781	136	7.6	165	162	98.1
Terai	1,408	129	9.2	448	357	79.6
Residence						
Urban	1,278	90	7.0	101	95	94.1
Rural	1,911	175	9.2	512	424	82.8
Respondent's education						
None	174	17	9.8	110	92	83.6
Primary	616	51	8.3	210	185	88.1
Secondary	892	54	6.0	145	123	84.8
High School plus	1,507	143	8.0	138	121	87.7
Father's education						
None	895	80	8.9	352	291	82.7
Literate	647	54	8.3	123	109	88.6
Primary/Secondary	709	70	9.9	105	88	83.8
High school plus	938	61	6.5	33	31	93.9
Mother's education						
None	1,918	174	9.1	562	471	83.8
Literate	585	51	8.7	37	34	91.9
Primary/Secondary	352	22	6.3	11	11	100.0
High school plus	334	18	5.4	3	3	100.0
Respondent's occupation						
Agriculture	336	37	11.0	193	174	90.2
Non-agriculture	585	87	14.8	256	229	89.5
No usual occupation	271	27	10.0	85	65	76.4
Students	1,997	114	5.7	79	51	64.6
Religion						
Hindu	2,729	224	8.2	531	448	84.4
Buddhist	246	22	8.9	20	20	100.0
Muslim	136	13	9.6	52	41	78.8
Others	78	6	7.7	10	10	100.0
Ethnicity						
Brahmin/Chhetri	1,187	100	8.4	108	103	95.4
Mongoloid	886	59	6.6	55	54	98.2
Terai caste	952	91	9.6	384	305	79.4
Occupational	164	15	9.1	66	57	86.4
Listened to reproductive health programmes on the radio						
None	779	54	7.0	248	197	79.4
Some	1,663	127	7.6	267	231	86.5
All	737	84	11.4	98	91	92.9
Total	3,189	265	8.3	613	519	84.6

Source: Nepal Adolescents and Young Adults Survey, 2000.

Table 4. Men engaging in risky sexual behaviour as a percentage of all single and married sexually active men by selected background characteristics (unweighted)

Characteristics	Single			Married		
	Number sexually active	Number engaging in risky sex	Percentage engaging in risky sex	Number sexually active	Number engaging in risky sex	Percentage engaging in risky sex
Respondent's age (years)						
14-16	52	12	23.1	30	4	13.3
17-19	116	23	19.8	178	16	9.0
20-22	97	19	19.6	311	24	7.7
Ecological region						
Hill	136	29	21.3	162	12	7.4
Terai	129	25	19.4	357	32	9.0
Residence						
Urban	90	12	13.3	95	9	9.5
Rural	175	42	24.0	424	35	8.3
Respondent's education						
None	17	5	29.4	92	1	1.1
Primary	51	11	21.6	185	12	6.5
Secondary	54	10	18.5	123	14	11.4
High School plus	143	28	19.6	121	17	14.0
Father's education						
None	80	19	23.8	291	20	7.3
Literate	54	11	20.4	109	6	4.8
Primary/Secondary	70	14	20.0	88	14	15.9
High school plus	61	10	16.4	31	4	12.9
Mother's education						
None	174	30	17.2	471	37	7.9
Literate	51	15	29.4	34	6	17.6
Primary/Secondary	22	6	27.3	11	1	9.1
High school plus	18	3	16.7	3	0	0.0
Respondent's occupation						
Agriculture	37	9	24.3	174	13	7.5
Non-agriculture	87	17	19.5	229	22	9.6
No usual occupation	27	3	11.1	65	4	6.2
Students	114	25	21.9	51	5	9.8
Religion						
Hindu	224	48	21.4	448	38	8.5
Buddhist	22	3	13.6	20	0	0.0
Muslim	13	3	23.1	41	5	12.2
Others	6	0	0.0	10	1	10.0
Ethnicity						
Brahmin/Chhetri	100	21	21.0	103	10	9.7
Mongoloid	59	8	13.6	54	1	1.9
Terai caste	91	21	23.1	305	25	9.4
Occupational	15	4	26.7	57	8	8.2
Listened to reproductive health programmes on the radio						
None	54	16	29.6	197	13	6.6
Some	127	21	16.5	231	21	9.1
All	84	17	20.2	91	10	11.0
Total	265	54	20.4	519	44	8.5

Source: Nepal Adolescents and Young Adults Survey, 2000.

sexual behaviour are those with no education, those whose fathers had no education, those whose mothers had moderate levels of education, those who had agricultural occupations and those who had not listened to reproductive health programmes on the radio.

Among sexually active married men, risky sexual behaviour is most prevalent among those aged 14-16 years, those with high levels of education (and whose fathers were also well educated), those whose mothers had moderate levels of education, and those who had listened to 'all' reproductive health programmes on the radio.

The context of risky sexual behaviour amongst young single men was explored in the focus group discussions. A range of factors influence risky sexual behaviour of young single men in the 'hill' ecological region of Nepal. These factors include: opportunistic sex, ignorance, the lack of availability of condoms, being unable to use services from health facilities, the use of drugs or alcohol, privacy, an intention to marry the sexual partner and a natural taste for sex without using condoms.

The most commonly described reason for risky sexual behaviour was an unexpected opportunity. For example, in rural areas young men may meet a girl in the bushes, forests or in a lonely place while collecting firewood or fodder for cattle. Sex may occur quickly, with no consideration being given to condom use:

> *When they meet in the forest or bushes and if no one is around, they hurriedly want to finish as soon as possible. They do not have time to think about condoms* (rural male aged 16 years).

> *In [the] village, it often happens accidentally. When partners meet in [a] lonely place they suddenly feel desperate to do that and never prepared to use condoms in this unexpected incidence* (age 19 years).

The availability of privacy for sexual encounters is the second most commonly described reason for risky sex. When young rural men move to a new area (typically an urban area) for education or employment, they are away from family and relatives and therefore rent a

private room. This privacy and independence enables them to conduct sexual relationships as they are free from parental control:

> *..migrated people who have rented [a] room away from natal home are free from the close supervision of their parents. No one is there to disturb them. They are even free to bring girls at any time and have sex. They often do not think about condom use since they do not care about the future consequences* (age 20 years).

In addition, young men also felt that sexual risks were taken due to ignorance:

> *...people in rural area have heard of condoms but do not know how to use them* (age 17 years).

Young men also felt embarrassed to ask condoms from the health facilities and feared harassment by the health workers or sales assistants:

> *When unmarried men go to buy condoms the salesperson harasses them and also warns that (s)/he will tell to his parents or family* (age 18 years).

They were also equally concerned about getting a bad reputation by buying condoms.

> *... young persons [are] embarrassed to buy condoms due to the fear of bad reputation in the society* (age 18 years).

This is because buying condoms by single young men indicates their intention to have premarital sex which is condemned by Nepalese society. Some young men would have been prepared to obtain condoms from a neighbouring village where they were not so well known, but lacked the travel fare.

Young men want to experiment with sex but do not think they can impregnate girls or can be infected by sexually transmitted infections:

> *…teenagers neither think about pregnancy and sexually transmitted infections nor think about condom use. They just want to experiment with sex* (urban boy aged 16 years).

Some young men in the FGDs felt that alcohol drink and drug use influence risky sex, because

> *…..drug users and alcohol drunk never think of using condoms while having sex since they lost their judgemental sense* (boy aged 17 years).

The view was expressed that condoms reduce sexual pleasure and are, in some sense, 'unnatural':

> *Young people who know about condoms still do not use them because these people have strong feelings not to miss the natural taste* (age 19 years).

There are parts of Nepal (for example in the mid-Western region) in which the local culture creates an environment conducive to unsafe sex among young boys and girls. In addition, some traditional occupational sex workers (*baadi*) do not care to use condoms since they have been carrying on unsafe sex as an occupation for many years.

6. Logistic regression analysis of sexual activity and risky sexual behaviour

To investigate further, logistic regression analysis was carried out to identify the association between various individual-level characteristics and the probabilities of being sexually active and, given sexual activity, of engaging in risky sexual behaviour. Four models were estimated. The first two identify the contribution of covariates to being sexually active for single men and married men respectively. The third and fourth models respectively explore the contribution of covariates to the probability of single and married sexually active men

engaging in risky sexual behaviour. The first and second models were respectively based on 3,189 single men and 613 married men. The third and fourth models were respectively based on 265 sexually active single men and 519 sexually active married men.

As described in the previous section, initial exploration of the data showed that sexual activity and risky sexual behaviour of sexually active young men were associated with the following covariates: respondent's age, ecological region, urban/rural residence, respondent's education, respondent's mother's and father's education, religion, ethnicity and whether or not the respondent had listened to reproductive health programmes on the radio. Thus all these covariates were initially included in the models.

In order to account for the weighting, therefore, we initially included dummy variables in the models for the 13 districts from which the sample was drawn. However, we found difficulty in estimating district-level coefficients in the models for married men. We therefore included rather cruder controls in these models. In the model for sexual activity among married men, we treated all 'hill' districts as a single category. In the model for risky sexual behaviour among sexually active married men, we included a simple control for urban/rural residence (this being the main divide governing the weighting structure).

The results of all four models are shown in Table 5. Factors that had a significant impact on young single men being sexually active were district of residence, respondent's age, and respondent's occupation. As expected, the probability of single men having had sex in the 12 months prior to the survey date increases substantially with age. Single men who were either 'unemployed' or 'students' were significantly less likely to be sexually active than were employed men. Men from Banke and Rupandehi districts (both rural) were especially likely to be sexually active, and those from Lalitpur and Morang (Biratnagar) districts (both urban) had lower rates of sexual activity than those from other districts.

Like single men, married men who described themselves as 'unemployed' or 'students' had lower rates of sexual activity than their counterparts who were employed. This suggests that young men with higher economic status are more likely to be sexually active. Among married men, sexual activity was, in general, much lower in the rural districts of the *Terai*

Table 5. Results of models of factors associated with sexual activity, and with risky sexual behaviour among sexually active men

Covariate and category	Single men				Married men			
	Model I Sexual activity		Model II Risky sex		Model III Sexual activity		Model IV Risky sex	
	β	SE	β	SE	β	SE	β	SE
District								
Kathmandu (r)								
Kavrepalanchok	-0.57	0.37	0.79	1.02	(r)			
Dailekh	-0.06	0.37	1.24	0.93	(r)			
Kaski (Pokhara)	0.32	0.31	0.23	0.89	(r)			
Lalitpur	-0.97**	0.42	-0.14	1.24	(r)			
Ilam	0.12	0.30	1.08	0.79	(r)			
Arghakhanchi	0.42	0.30	2.32***	0.79	(r)			
Birgunj	-0.08	0.33	0.64	0.87	-1.48	1.18		
Banke	0.98***	0.30	0.87	0.77	-2.70***	0.75		
Biratnagar	-0.61*	0.35	-0.46	1.23	0.57	1.47		
Rupendehi	0.53*	0.31	0.06	0.90	-2.99***	0.76		
Saptari	0.23	0.33	0.58	0.93	-2.43***	0.81		
Mahottari	0.39	0.32	1.11	0.86	-1.47*	0.84		
Respondent's age (years)								
14-16	-1.05***	0.18			-1.12***	0.33		
17-19 (r)								
20-22	0.56***	0.16			1.44***	0.34		
Respondent's occupation								
Employed (r)								
Unemployed and students	-0.65***	0.14			-0.51*	0.28		
Listened to reproductive health programmes on the radio								
None (r)								
Some	0.18	0.18	-1.06**	0.45				
All	0.46	0.31	-1.32**	0.55				
Mother's education								
Not literate (r)								
Literate			1.06***	0.38				
Father's education								
None (r)								
Primary or above							0.66*	0.35
Respondent's education								
None or Primary (r)								
Secondary or higher							0.89**	0.36

Notes: *significant at p<0.10; **p< 0.05; ***p<0.01; (r) = included as part of the reference category.

Source: Nepal Adolescents and Young Adults Survey 2000.

region (Banke, Rupendehi, Saptari and Mahottari) than in the 'hill' districts. This result is consistent with the observation of the Nepal Demographic and Health Survey 2001. It provides an interesting contrast with unmarried men, for these districts tended to be

associated with higher than average rates of sexual activity among the latter. As expected, sexual activity rates among married men also varied with the respondent's age.

The results of the models of risky sexual activity in the 12 months preceding the survey show that, among unmarried men, Arghakanchi district is associated with very high rates of risky sexual behaviour. Risky sexual behaviour is also more common among men with literate mothers than those with illiterate mothers. A particularly interesting result is that having listened to reproductive health programmes on the radio is associated with a much reduced chance of engaging in risky sexual behaviour among unmarried men. This result should be viewed together with the fact that unmarried men who listened to these programmes were more likely to be sexually active than those who did not (though this tendency was not significant at conventional levels). Among married men, increased levels of risky sexual behaviour were associated with higher levels of respondent's education and respondent's father's education. This probably reflects the general fact that married men of higher socio-economic status are more likely to engage in risky sexual activity, possibly with commercial sex workers.

In Table 6 we illustrate some of the key findings of the logistic regression analysis further by presenting predicted probabilities of being sexually active and engaging in risky sexual behaviour among unmarried men according to two key factors: district and whether the men had listened to reproductive health programmes on the radio. The predicted probabilities in the table relate to men aged 17-19 years who were employed. The first three columns refer to men who had listened to no reproductive health programmes. The first column shows the predicted probabilities of being sexually active. The second column shows the predicted probabilities of engaging in risky sexual behaviour among those who were sexually active. The third column is an estimate of the unconditional probability of risky sexual activity, and is calculated by multiplying the probabilities in the first two columns. Columns 4-6 are similar, except that they relate to men who had listened to all reproductive health programmes. The overall pattern is clear: men who listened to all reproductive health programmes were more likely to be sexually active, but less likely to have engaged in risky sexual behaviour, than those who had not listened to the radio programmes.

Table 6. Predicted probabilities of sexual activity and risky sex among single men in certain districts according to whether they had listened to reproductive health programmes on the radio

District	Listened to 'no' reproductive health programmes on the radio			Listened to 'all' reproductive health programs on the radio		
	Sexual activity	Risky sex| sexually active	Risky sex	Sexual activity	Risky sex| sexually active	Risky sex
Lalitpur	0.04	0.15	0.01	0.07	0.05	0.00
Arghakhanchi	0.11	0.65	0.07	0.16	0.33	0.05
Banke	0.24	0.15	0.04	0.34	0.05	0.02
Morang (Biratnagar)	0.06	0.15	0.01	0.04	0.05	0.00
Rupendehi	0.17	0.15	0.03	0.25	0.05	0.01
Others	0.11	0.15	0.02	0.16	0.05	0.01

Note: The probabilities given here have been calculated for a man in the reference category on the other covariates in the models (that is, a man aged 17-19 years who was employed and whose mother was not literate).

Source: Nepal Adolescents and Young Adults Survey 2000.

7. Discussion and conclusion

Despite strong social and cultural taboos, young men in Nepal are not only involved in premarital and extramarital sex but also in risky sexual behaviour. At the same time, the prevalence of sexual activity among single men revealed by the NAYA data is much lower than the levels observed by Tamang *et al*. (2001) (54 per cent among residents and 40 per cent among non-residents) and Puri (2002). This is because the latter studies were based on especially high-risk groups rather than the general population. Although studies in the past have found, if any thing, that boys over-report sexual activity (Thapa *et al.,* 2001; Molhotra *et al.,* 2000) we can not rule out the possibility that, as young men in Nepal are expected to remain chaste, unmarried men may under-report their sexual activities.

Among young married men interviewed in the NAYA survey, 7.7 per cent were engaged in extramarital sex. About one in every eleven sexually active married men is engaged in risky

sexual behaviour. This means not only that a large proportion of married men are at high risk of infections but also that their wives and partners are likely to be at risk.

Students and unemployed married men were less sexually active than employed men. Qualitative investigations suggested that as Nepal is a patriarchal society, the responsibility of the son is to build his career and to be the main earner for his family. Parents of male students studying away from home arrange marriages for them. Following these marriage, their new daughters-in-law provide labour inputs into the household and farms, allowing their husbands to be free to continue their education and enhance their career prospects.

The regression results showed that young men whose mothers were literate were more likely to be engaged in risky sexual behaviour. Thapa *et al.* (2001) observed that better-educated parents allowed both sons and daughters boy-girl interaction (albeit boys were given more leeway), than parents with less education. In the same study the authors also mentioned that information about sexuality given to unmarried children is highly restricted (especially for daughters). This shows that on one hand, boy-girl interaction may expose young people to sexual activity but that the restriction on information about sexuality may lead them to involve themselves in risky behaviour. Increasing levels of education among mothers seem to be associated with a liberal attitude to boy-girl interaction. But because this is not accompanied by information about reproductive health, young people could have the opportunity to indulge in sexual activity without the knowledge necessary to prevent risky behaviour.

Interestingly, sexual activity among unmarried men tended to be higher in rural areas than in urban areas. This result could be the reflection of cultural heterogeneity among Nepalese societies where local social and cultural norms influence individuals' behaviour. Rates of both sexual activity and risky sexual behaviour were observed to be highest in the western district of Banke and the mid-western district of Arghakanchi. There are areas of rural Nepal (especially in the 'hill' ecological region) where premarital sexual behaviour among unmarried young people is condoned by the local culture. Arghakanchi seems to be one of these, but it is probably not unique. The same pattern is likely to occur in other districts which were not included in the NAYA sample.

The qualitative research, which investigated the context of sexual behaviour of young men in the 'hill' ecological region, identified a number of reasons for risky sexual behaviour. Among the most common reasons for risky sexual activity was 'opportunistic sexual relations', which take place when young people are presented with unexpected opportunities in isolated places such as forests and bushes. This type of sexual encounter has been described by Puri and Juwana (2004). Using condoms in such a situation was, according to the respondents, rarely possible. However, if young men were to have spare condoms in their pockets and knew how to use them they could practice safer sex. Sexual naivety, notably ignorance of future consequences of unsafe sex, was identified as a further cause of risky sexual behaviour. Sex education is necessary to educate these young people about the consequences of unsafe sex. At the same time, condoms must be accessible to young people as well as information on how to obtain condoms and use them effectively.

Another common reason for risky sexual behaviour mentioned by the FGD participants was 'independence'. The investigation revealed the changed sexual behaviour of many unmarried boys after moving to work in an urban area, residing in a temporarily rented room, away from their families and relatives in natal hill village. These behavioural changes can be considered in the context of liminality and sexual scripting theory. The term 'liminality' refers to the 'in-between-ness', the temporary loss of social bearings and discontinuity in social fabric, which typically occurs when people are in transition (Hennink *et al.*, 2000). This term therefore characterises the changing behaviour of people after they are freed from social obligation and monitoring. Young men who move to urban areas to work are free from social obligation since they are no longer controlled by the family and the community. They are free to bring girls to their room whenever they like. Although these young men have heard of condoms they do not bother to use them because they want to enjoy sex without condoms. These men seem carefree and largely oblivious to the future consequences of their actions. The same argument does not, however, apply to students, who are less likely to sexually active than other young men. It is possible that because of the importance of their studies to their future career, men who leave home to be students remain much more under the influence of their families.

Young men also feared harassment by health workers in seeking condoms. This clearly indicates that a gap exists between service providers and clients, meaning that young men

could be reluctant to go to health workers for their reproductive health problems. The health workers therefore, need to be trained better to understand young people's sexual behaviour so that they can bridge the gap between service providers and young clients.

The lack of availability of condoms, despite the practice of hanging condom boxes outside health facilities was identified as another problem. This severely hindered the access of condoms to sexually active young couples. Enough condoms must be kept in the condom boxes to that they are not empty when young men come to collect a condom. Many young men also said that they were embarrassed to take free condoms from the condom box in front of others. Currently there is little confidentiality in dispensing condoms to young people as those taking condoms are required to register their name and address and the amount of condoms taken. Young men reported that this discouraged to their use of condoms. Introducing the anonymous distribution of condoms would reduce the scepticism of young people.

Related to this, men who had heard about condoms and who intended to use condoms reported that they were too embarrassed to ask for condoms from the health facilities. Psychologically, therefore, young men were readier to take risks than they were to get a bad reputation through asking for or buying condoms. Counselling for young people by trained health workers might alleviate this problem.

Programmatically, interventions need to be tailored to meet the specific needs of this group. Our results suggest that young men do respond to information made available through such media as reproductive health programmes on the radio, in that sexually active unmarried men who had listened to such programmes had lower rates of risky sexual behaviour. Nevertheless, there is, overall, inadequate knowledge among both young men and their parents of the adverse consequences of risky sexual behaviour. So as suggested by Thapa *et al.* (2001), it is important to provide young people with a school- or community-based family-life education course that addresses their reproductive health needs in a holistic manner. Also it would be useful to develop a parent curriculum that could be taught through a community-based organisation. This curriculum should provide basic reproductive health information and promote better communication between children and parents.

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References

Akwara, P.A., Madise N.J. and Hinde, A. (2003) 'Perception of risk of HIV/AIDS and sexual behaviour in Kenya', *Journal of Biosocial Science* 35, 384-411.

Bhatta, P., Thapa, S. and Neupane, S. (1994) 'Commercial sex workers in Kathmandu Valley: profile and prevalence of sexually transmitted diseases', *Journal of Medical Association* 32, 191-203.

Blanc, A. (2001) 'The effect of power in sexual relationships on sexual and reproductive health: an explanation of the evidence', *Studies in Family Planning* 32, 189-230.

Caldwell, J.C. and Caldwell, P. (1993) 'The nature and limits of the sub-Saharan African AIDS epidemic: evidence from geographic and other patterns', *Population and Development Review* 19, 817-48.

Choe, M.K., Hatmadji, S.H., Podhista, C., Raymundo, C.M. and Thapa, S. (2004) 'Substance use and premarital sex among adolescents in Indonesia, Nepal, the Philippines and Thailand', *Asia-Pacific Population Journal* 19, 5-26.

Cleland, J. (1995) 'Risk perception and behavioural change', in Cleland, J. and Ferry, B. (eds) *Sexual Behaviour and AIDS in the Developing World*, London, Taylor and Francis, pp. 157-92.

Coates, T. J. and Collins, C. (1998) 'Preventing HIV infection', *Scientific American* 298, 10 July (Special Report: New Victories Against HIV), 76-7.

Cohen, B. and Trussell, J. (eds) (1996) *Preventing and Mitigating AIDS in Sub-Saharan Africa: Research and Data Priorities for the Social and Behavioural Sciences*, Washington DC, National Academic Press.

Dahal, D.R. (1996) 'Socio-cultural and demographic perspectives of Nepalese women: problems and issues', *Population and Development in Nepal* 4, 145-55.

Dahal, G.P. (1999) 'An insight on the recommendation of the ICPD Programme of Action: emerging challenge to implement reproductive health policy in Nepal', *Family Planning Association of Nepal Journal of Reproductive Health* 1, 32-44.

Dixon-Mueller, R. (1993) 'The sexuality connection in reproductive health', *Studies in Family Planning* 24, 269-82.

Furber, A.S., Newell, J.N. and Lubben, M.M. (2002) 'A systematic review of current knowledge of HIV epidemiology and of sexual behaviour in Nepal', *Tropical Medicine and International Health* 7, 140-8.

Gage, A. (1998) 'Sexual activity and contraceptive use: the components of the decision making process', *Studies in Family Planning* 29, 154-66.

Gurubacharya, V. and Suvedi, B. (1994) 'Sexual behaviour pattern in Nepal', in *10th International Conference on AIDS*, Tokyo, Secretariat for the 10th International Conference on AIDS, p. 299.

Hennink, M., Cooper P. and Diamond I. (2000) 'Seasonal work and sexual behaviour', *Journal of Sex Research* 37, 175-83.

Hulton, L.A., Cullen, R. and Khalokho, W.S. (2000) 'Perceptions of the risks of sexual activity and their consequences among Ugandan adolescents', *Studies in Family Planning* 31, 35-46.

Ingham, R., Woodcock, A. and Stenner, K. (1992) 'The limitation of rational decision making models as applied to young people's sexual behaviour', in Aggleton, P., Davies, P. and Hart, G. (eds) *AIDS: Rights, Risk and Reason*, London, Falmer Press, pp. 163-73.

Ingham, R. and van Zessen, G. (1997) 'Towards an alternative model of sexual behaviour: from individual properties to international processes', in Campendoudt, L.V., Cohen, M., Guizzadi, G. and Hauser, D. (eds) *Sexual Interactions and HIV Risk: New Conceptual Perspectives in European Research*, London, Taylor and Francis, pp. 83-99.

Joint United Nations Programme on HIV/AIDS (UNAIDS) (2000) *National AIDS Programmes, a Guide to Monitoring and Evaluation*, Geneva, UNAIDS.

Kippax, S., and Crawford, J. (1993) 'Flaws in the theory of reasoned action: its application to AIDS prevention behaviour', in Terry, D.J., Gallois, C. and McCanish, M. (eds) *The Theory of Reasoned Action: its Application to AIDS-Preventive Behaviour*, Oxford, Pergamon Press, pp. 253-69.

Lagarde, E., Auvert, B., Chege, J., Sukwa, T., Glynn, J.R., Weiss, H.A., Akam, E., Laourou, M., Carael, M., and Buve A. (2001) 'Condom use and its association with HIV/sexually transmitted diseases in four urban communities of sub-Saharan Africa', *AIDS* 15 (supplement 4), S71-8.

Lundgren, R. (2000) *Research Protocol to Study Sexual and Reproductive Health of Male Adolescents and Young Adults in Latin America*, Washington DC, Pan-American Health Organisation Division of Health Promotion and Protection.

Malhotra, A., Mathur, S., Mehta, M., Moktan, P.L. and Bhadra, R., (2000) 'Adolescent reproductive health and sexuality in Nepal: combining quantitative and participatory

methodologies', paper presented to Annual Meeting of Population of America, Los Angeles, 23-25 March.

MEH Consultants (P) Ltd. and Research Group for Health Economics and Development (2000) *Report of Response Analysis on HIV/AIDS in Nepal, Submitted to His Majesty's Government of Nepal*, Kathmandu, Ministry of Health.

Ministry of Health (2000) *National Adolescent Health and Development Strategy*, Kathmandu, Family Health Division.

Ministry of Health (2001) *Nepal Demographic and Health Survey 2001*. Kathmandu, Family Health Division.

Myer, L., Mathews, C. and Little, F. (2002) 'Measuring consistent condom use: a comparison of cross-sectional and prospective measurements in South Africa', *International Journal of STD and AIDS* 13, 62-3.

Nag, M. (1995) 'Sexual behaviour in India with risk of HIV/AIDS transmission', *Health Transition Review* 5 (supplement), 293-305.

National Planning Commission/UNICEF (1996) *Children and Women in Nepal: A Situation Analysis*, Kathmandu, UNICEF.

Puri, M. (2002) Sexual risk behavior and risk perception of unwanted pregnancy and sexually transmitted infection among young factory workers in Nepal. Kathmandu, Centre for Research on Environment, Health and Population Activities.

Puri, M. and Busza, J. (2004) 'In forest and factories: sexual behaviour among young migrant workers in Nepal', *Culture, Health and Sexuality* 6,145-58

Shrestha, J. and Gurubacharya, V. (1996) 'STD/AIDS related knowledge, beliefs and practice among college level students in Kathmandu', in *11th International Conference on AIDS*, Vancouver, Secretariat for the 11th International Conference on AIDS, p. 468.

Suvedi, B.K., Baker, J. and Thapa, S. (1994) 'HIV/AIDS in Nepal: an update', *Journal of the Nepal Medical Association* 32, 204-13.

Tamang, A., Nepal, B., Puri, M. and Shrestha, D. (2001) 'Sexual behaviour and risk perceptions among young men in border towns of Nepal', *Asia-Pacific Population Journal* 16, 195-210.

Thapa, S., Davey, J., Waszak, C. and Bhadra, R. (2001) 'Reproductive health needs of adolescents and youth in Nepal, insights from a focus-group study', Kathmandu, Family Health International, Population and Reproductive Health.

Thapa, S., Dhital, M. and Neupane, S., (2002) *Assessing the Quality of Survey Data on Adolescent Sexuality by Talking with the Field Staff*, Kathmandu, Family Health International.

United Nations (1994) *Program of Action of the United Nations International Conference on Population and Development*, New York, United Nations Population Fund.

United Nations (1995) *Population and Development: Program of Action adopted at the International Conferences on Population and Development, Cairo, 5-13 September 1994, Volume 1*, New York, United Nations.

Upadhyay, P. (1998) 'Challenge in implementing HIV/AIDS/ STD in prisons in Kathmandu', in *12th World AIDS Conference*, Geneva, Secretariat for the 12th World AIDS Conference, pp. 703-4.

Verma, R.K. (1997) 'Reproductive health issues: focus on men', *Indian Association of Social Science Institutions Quarterly* 16, 172-82.

World Health Organisation (2001) *Sexual Relations among Young People in Developing Countries: Evidence from WHO Case Studies*, Geneva, World Health Organisation.