



# COITAL EXPERIENCE AMONG ADOLESCENTS IN THREE SOCIAL- EDUCATIONAL GROUPS IN URBAN CHIANG MAI, THAILAND

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*This article compares coital experience of Chiang Mai 17–20-year-olds who were: (1) out-of-school; (2) studying at vocational schools; and (3) studying at general schools or university. Four-fifths, two-thirds and one-third, respectively, of males in these groups had had intercourse, compared to 53, 62 and 15 per cent of females. The gender difference for general school/university students, but not vocational school students, probably reflects HIV/AIDS refocusing male sexual initiation away from commercial sex workers. Vocational school females may have been disproportionately affected. Loss of virginity was associated, for both sexes, with social-educational background and lifestyle, and was less likely in certain minority ethnic groups. Among males, it was also associated with age and parental marital dissolution, and among females, with independent living and parental disharmony. Within social-educational groups, lifestyle variables dominated, but among general school/university students, parental marital dissolution (for males) and disharmony (for females) were also important, and Chinese ethnicity deterred male sexual experimentation.*

KEYWORDS: coital experience; adolescents; social-educational groups; Thailand; sexual debut; sexual coercion

## Introduction

Thai adolescent sexuality was little studied before the mid-1980s, and such research as was conducted (e.g. Muangman 1983) focused on sexual knowledge and attitudes. Behavioural research was largely eschewed (Sethaput 1995), but notions of impropriety surrounding it quickly dissipated as the threat HIV/AIDS posed became starkly clear. Beginning with Woothiprasit's (1984) thesis, a raft of studies appeared estimating, by sex, proportions of unmarried 'adolescent' samples that had ever had sexual intercourse.

Their results defied close comparison because of variations in sample design, methodology, and the age ranges, age distributions, social backgrounds and geographic locations of groups studied (Xenos *et al.* 1993). However, a regular early finding was huge gender disparities in coital activity (Chaipak 1987; Chompootaweeep 1988; Ford & Kittisuksathit 1996; Koetsawang 1987; Nuchanart 1988; Prasartkul *et al.* 1987; Ruggao

1997; Sittitrai *et al.* 1992a; Sittitrai *et al.* 1992b; Wongboonsin & Porapakkham 1989; Woothiprasit 1984). Koetsawang (1987), for example, reported, from a survey of 3420 Bangkok university, teachers' college and commercial college students, that 45 per cent of males, but only five per cent of females aged 16–19, and 62 per cent and eight per cent, respectively, of those aged 20–22, had had intercourse. Doubtless, such disparities, in part, reflected female under-reporting and male over-reporting flowing from a widely observed double standard in premarital sexual morality (Ford & Kittisuksathit 1994, 1996; Sartsara 2001; Udomratn & Tungphaisal 1990; Vuttanont *et al.* 2006). In the words of Ford and Kittisuksathit (1996, p. 28), '[y]oung men who are virgins are ridiculed by their peers. . . . [However], pre-marital intercourse [is] strictly unacceptable for 'respectable' women [and] considered to be highly damaging to the reputation of [her] and her family'. But, there is really no question that the cultural proscription of intercourse for unmarried females, but not males, also gave rise to substantial real behavioural disparity.

The other consistent early finding was that sexually active adolescent males had commonly debuted with commercial sex workers (CSWs) (Chaipak 1987; Koetsawang 1987; Nuchanart 1988; Ruggao 1997; Sittitrai *et al.* 1992a; Sittitrai *et al.* 1992b; VanLandingham *et al.* 1993; Woothiprasit 1984; Xenos *et al.* 1993), other debut partners being mostly women with whom no longer-term relationship existed or developed (Ruggao 1997; Sittitrai *et al.* 1992a; Sittitrai *et al.* 1992b). Of major concern, as Thailand's predominantly sex industry-based AIDS epidemic emerged, was high proportions of coitally active single males who had had both CSW and non-CSW partners (Ford & Kittisuksathit 1996; Udomratn & Tungphaisal 1990; VanLandingham *et al.* 1993; Xenos *et al.* 1993). Analysing 1988 data for 15–24-year-old unmarried males, for example, Xenos *et al.* (1993) found that while half of the non-virgins had had only CSW partners, 41 per cent had had both CSW and non-CSW partners, and just nine per cent, non-CSW partners only. The potential for HIV transmission from sex workers to other women was worrying.

More recently, HIV/AIDS and the steps taken by Thai authorities to combat it (East-West Center 2002; Phoolcharoen 2006; Porapakkham *et al.* 1995; United Nations Development Programme 2004) have wrought considerable change. Reliance by adolescent males on CSWs as debut or subsequent coital partners has plummeted, and there has been greatly increased pressure on non-CSW peers to accommodate their sexual desires. This, in turn, has resulted in both wider acknowledgement of premarital intercourse by young females, possibly reflecting an increment in disclosure as well as experience, and a growing academic interest in premarital sexual coercion. There has also been a generational dimension to the increased pressure on young women with the cultural expectation of female premarital chastity remaining firmly in place among parents and grandparents, in policies governing sexual health services, and among many health service providers. As Morrison (2004, p. 339) observed:

The role of the family, and with it women's position and status, has been profoundly affected by . . . macro-changes arising from Thailand's participation in the global economy. Nonetheless, the traditional sense of family remains strong, which is creating conflict and tension, particularly for the young women, who are pulled in several directions.

A 1995 rural survey of 1094 never married 15–24-year-olds by Isarabhakdi (2000) gave an early hint of change. The gender disparity in coital experience remained huge and 46 per cent of experienced males had had a CSW first partner, but few had visited one in

the preceding six months. The AIDS-inspired retreat from CSWs had begun (Celentano *et al.* 1998; Nelson *et al.* 1996). Trends were more overtly noted by Podhisita and Pattaravanich (1995), who described the proportions of females reporting premarital intercourse in their national survey of 2180 15–24-year-olds (13.6 per cent and 6.5 per cent in urban and rural areas, respectively) as ‘probably the highest ever’ (p. 85), and noted that ‘relatively small’ (p. 86) proportions of sexually experienced males (14 per cent and 22 per cent in urban and rural areas, respectively) had debuted with CSWs. Later studies confirmed a wholesale desertion of CSWs for ‘girlfriends’ or ‘lovers’ as first coital partners (Ngamprapasom 2001; Phoka 1998; Sriputphong 2006), with Sriputphong (2006) reporting just three per cent of experienced males in a national sample of secondary school students having debuted with CSWs. Besides confirming this trend among men born in the 1970s, Ngamprapasom (2001) documented an earlier trend *towards* CSWs among those born in the 1950s and 1960s, with men born in the 1940s having mostly debuted with spouses.

The trend to higher proportions of single females acknowledging coital experience has been more marked in studies of vocational/technical students than in those of more academically focused general school (*mathayom* 4–6 or upper secondary school) students. Class differences in female coital activity are implied in comparisons of some earlier studies based on samples from different social backgrounds, and are explicit in Soonthorndhada’s (1996) finding that 5.2 per cent of garment workers, but only 0.8 per cent of students, in a sample of 15–19-year-old Bangkok females were non-virgins. However, while Sriputphong’s (2006) national survey of secondary school students found six per cent and nine per cent of females aged 14–16 and 17+, respectively, had ever had intercourse, and O-Prasertsawat and Petchum (2004) produced similar results for a Bangkok secondary school sample, recent studies of vocational/technical students (e.g. Khumsaen & Gary 2009; Rasamimari *et al.* 2007; Rathnawardana Guruge 2004; Thato *et al.* 2003) have yielded much higher levels of female coital experience, both absolutely and as proportions of male levels. Perhaps the most notable study, because it used audio-computer-assisted self-interviewing to assure confidentiality, was one of 1725 15–21-year-olds at three vocational schools in Chiang Rai in 1999 (Liu *et al.* 2006; Manopaiboon *et al.* 2003a; Manopaiboon *et al.* 2003b; van Griensven *et al.* 2001). It found that 22 per cent, 48 per cent and 57 per cent of females aged 15–17, 18–19 and 20–21, respectively, had had intercourse, compared to 26 per cent, 48 per cent and 72 per cent of males, respectively. Young women’s willingness to disclose coital experience might have increased, but there is little doubt that substantial behavioural change has also occurred.

Hardly surprisingly given the suddenness with which AIDS compelled young men to revise their approach to sexual initiation, some of this change has been coerced, that is, induced by physical force or psychological persuasion. The Chiang Rai study just cited found 6.5 per cent of males, but 21.0 per cent of females, claiming ever to have been coerced into sexual contact or intercourse, with half of the males, but less than two per cent of the females, having first been coerced by one of their own sex (Manopaiboon *et al.* 2003a). About 13 per cent of male, but 48 per cent of female, non-virgins reported coercion, with intercourse having occurred in response to it at least once for 41 per cent of the males and 69 per cent of the females. Other recent studies addressing sexual coercion of young Thai women were Chamrathirong *et al.* (2007), Im-Em *et al.* (2005) and Sriputphong (2006). Coercion, defined more stringently as

'forced sex', of Thai males by same-sex partners has been explored by Guadamuz *et al.* (2011).

### Research Focus

Against the foregoing background, this paper takes up, explicitly, a theme that, in previous research, has largely been an undercurrent evident mainly in informal cross-study comparisons, although VanLandingham *et al.*'s (1993) study of males only is an exception, i.e. differential levels of coital experience in different social strata of Thai adolescent society. We investigate the influence of social-educational background and other factors on levels of adolescent coital experience by sex, probing collectively, then separately, the behaviour of three groups of 17–20-year-olds interviewed in Chiang Mai City, northern Thailand during the period May–October 2006. Our three groups comprise young people who, during the time of the study, were: (a) studying full-time at a general school (in *mathayom* 6) or university (the academic stratum aspiring to professional employment); (b) studying full-time at a vocational school (the stratum acquiring technical education to pursue skilled, para-professional or lower-level professional careers not requiring university training); and (c) out-of-school (the stratum disengaged from full-time education and working in unskilled or semi-skilled jobs, or who were unemployed). Most previous Thai studies have sampled from only one stratum and it is rare for all three to be treated together, comparatively.

We provide a general picture of the coital experience of male and female adolescents in these groups, after which selected factors associated with having had intercourse are investigated, by sex, across and within groups. Our broader study is a multi-method one, focused on adolescent lifestyles and relationships, combining a survey with in-depth interviews, focus groups and field observations. Several other papers have used data from all four sources (Tangmunkongvorakul *et al.* 2010a, 2010b, 2011a, 2011b). This one draws exclusively on the survey data, primarily using logistic regression analysis. We theorise that our three groups, in the order listed above, represent a descending hierarchy of personal career ambition and familial socio-economic circumstance across which, because of decreasing commitment to education, increasing focus on social activity and susceptibility to family disruption, and diminishing parental desire/capacity to discourage it, coital experience would be expected to increase. Moreover, we anticipate that within each stratum of this hierarchy, the gender-based double standard in premarital sexual morality should render males more widely experienced than females. We further propose that both in overall terms and within social-educational strata, having experienced intercourse is likely to be a function of: (i) older age, since coital initiation is cumulative with increasing age; (ii) consumption of tobacco, alcohol and drugs, such consumption indexing lifestyles that are socially intense, risk-taking and, for males, accord sexual experience high priority; (iii) religion and ethnicity, which might influence adherence to cultural mores governing sexual behaviour and/or focus on educational goals; (iv) the stability and harmony of parental relationships, which might bear on scrutiny and control of social behaviour, mental health and perceived need for companionship; and (v) among females, whether or not they lived under the direct oversight of parents or relatives, who could reinforce the cultural expectation of premarital chastity.

## Methods

### *Recruiting Survey Respondents*

Although this was a multi-method study, its centrepiece, and the sole source of data for this paper, was a self-completion survey of 1749 17–20-year-olds, 909 males and 840 females. We recruited respondents for this very sensitive survey from three sources. The first was youth-frequented public spaces, with the assistance of four non-governmental organisations (NGOs) that work with Chiang Mai youths, from which those recruited fell into all three social-educational groups. The second source was non-formal education centres, which provided three-hour weekend tutorials for young Thais who were outside the formal education system. All those sampled from this source fell into the out-of-school group. The third source was formal education institutions, i.e. vocational schools, general schools and a university, from which respondents were recruited to the vocational school and general school/university groups. From the perspectives of the three groups, samples were obtained as follows.

*The out-of-school sample.* Chiang Mai has 22 non-formal education centres. The six largest were chosen and all age-eligible youths present on a teaching day were invited to participate after having the survey explained to them. These young people were predominantly engaged in semi-skilled or unskilled employment, although some were unemployed. Unfortunately, an unusual sub-group of 27 females of Hill Tribe ethnicity, who lived in Catholic boarding houses and who, under that influence, were universally virgins, was recruited from this source, and its presence in the data should be kept in mind. Other out-of-school respondents were recruited through four youth-focused NGOs, i.e. the Harm Reduction Youth Programme, the Street Youth Outreach Team, the Adolescent Sex Education Outreach Team and the Men's Sexual Health Outreach Team. Working with NGO staff, the field research team, i.e. the first author and five northern Thai research assistants—three females and two males—aged under 24, recruited respondents from an array of public gathering places, including playing fields, shopping malls and public gardens, at various times of the day and night. Although clearly non-random and containing the unusual sub-sample just acknowledged, the out-of-school group was diverse and not dominated by any single source. That an effort was made to include such a group is important, as it had, hitherto, typically been ignored in favour of the relative ease of educational institution-based sampling. There had been previous studies, though, of both students and non-students (Soonthornhdhada 1996; VanLandingham *et al.* 1993), and of factory workers (Ford & Kittisuksathit 1996; Ruggao 1997). Overall, 132 out-of-school respondents (47 males and 85 females) were recruited from non-formal education centres, and 275 (191 males and 84 females), from public gathering places.

*The vocational school sample.* One public technical, one private technical and one private commercial school were randomly selected from among two public and 10 private vocational schools in Chiang Mai. Students of the target age (17–20 years) studying electronics, mechanics or computer technology in the technical schools, and marketing, hotel management or finance in the commercial school, were invited to participate after having the survey explained in classroom settings. This yielded 288 private school (133 male and 155 female) and 241 public school (224 male and 17 female) respondents, to whom were added 92 (52 male and 40 female) respondents recruited from public places. The gender disparity in recruitment from the public technical school broadly reflected the

gender imbalance in courses from which recruits were sought. It did not imply a marked relative reluctance by females to participate.

*The general school/university sample.* From nine public and 11 private high schools in Chiang Mai, one large private and one large public school were selected. Respondents (98 males and 164 females) were drawn from two classes each of final year (*mathayom 6*) students studying pure science, applied science and languages who volunteered to participate after having the survey explained in the classroom. There are also two public and two private universities in Chiang Mai, from which Chiang Mai University was chosen. Respondents (101 males and 226 females) were recruited voluntarily from eight faculties, i.e. medicine, nursing, engineering, agriculture, humanities, economics, accounting and social sciences, via posters displayed in libraries. To these two groups of respondents were added 63 males and 69 females recruited from public places who attended a general school or university.

Sample size targets were based on an error of  $\pm$  seven per cent at the  $p < 0.05$  significance level when measuring key indicators, e.g. the percentage with experience of sexual intercourse. Such an error was acceptable for public health estimates (Dietz *et al.* 2004) and ensured the sample size did not exceed our resources. The overall sample was conceptualised as comprising six sub-samples representing males and females separately in each social-educational setting. A required sub-sample size of 192 was obtained for an expected prevalence of 50 per cent (the proportion requiring the largest sample to be estimated with a given level of precision). We exceeded this target for all groups except out-of-school females (262 male and 459 female general school/university students; 409 male and 212 female vocational school students, and 238 male out-of-schoolers). Out-of-school females proved more difficult to recruit and we enlisted only 169 respondents (12 per cent below target).

We make no pretence that either our social-educational-sex sub-samples or our overall sample are random. Strict randomness is probably an unattainable goal for this population and subject matter without the sort of sampling frame that only government agencies are likely to have access to; this was a PhD study, with limited field resources. We do claim, however, to have consciously endeavoured to cover the full social spectrum of adolescents, of both sexes, in the city in which our study is set. As already intimated, most previous Thai studies have not done that, often using institutional samples focused on a single social-educational stratum, factory worker samples or if socially diverse, single-sex samples. We accept the potential for the overtly volunteer nature of our sub-samples and overall sample to have introduced biases no amount of speculation will resolve, and that the assumption of randomness underpinning our analyses is compromised. Ultimately, our study relies for its credibility on three things. The first is the care we take in executing our analysis, interpreting our results and placing caveats on interpretations where they seem called for. The second is the fact that the differentials we establish are generally marked and statistical associations strong, rarely marginal. This suggests that in spite of the sampling limitations, our findings typically have a margin for error and that in a broad sense, our major conclusions are unlikely to be unreliable. Thirdly, given the literature reviewed, the recent trends in Thai adolescent sexuality it discloses and our knowledge of Thai society, our findings, again in a broad sense, and the story we construct from them are eminently plausible. Elements of that story warrant further, more focused research, but



we believe our study, despite its limitations, to be a worthwhile, important addition to the literature.

### *Data Collection*

Our deliberately young northern Thai field research team comprised university graduates trained in quantitative and qualitative social research methods, who were given further study-specific training. It is neither known nor knowable to what extent Thai cultural beliefs of the discussion of sexual matters being inappropriate for young women dissuaded their participation, but the fact that almost as many females as males were recruited suggests this was not a major deterrent. These beliefs are likely to be held more strongly by older generations, and the first author's impression is that efforts made to explain the content and purpose of the study (potential participants received a written information sheet), the reassurance given as to confidentiality, and the stressing of the right to withdraw at any time resulted in little difficulty recruiting female respondents. There were no refusals, among young women individually asked to participate in the survey, to submit to in-depth interviews or to join a focus group. There were also no instances of distress encountered while completing the survey, in-depth interviews or focus groups.

Two methods were used to administer the survey. Where the internet was available, respondents completed an online computer-assisted self-interview (CASI—700 respondents). Elsewhere, a 22-page, self-administered paper questionnaire (SAQ—1049 respondents) was used. The survey covered socio-economic background, recreational activities, alcohol, tobacco and drug use, relationships, sexual identity and experience, sexually transmitted diseases, pregnancy, abortion and birth control, mental health, and the need for sexual health services. Most questions were pre-coded. Both CASI and SAQ formats were pre-tested, and a comparison of data from 218 heterosexual male vocational school students who used CASI with 140 who used SAQ provided good assurance that the two approaches produced similar results. On 10 behavioural items, only one significant difference was found (significantly more SAQ respondents than CASI respondents had ever smoked in the past year), and proportions acknowledging nominated behaviours were often remarkably similar, e.g. 'ever had sexual intercourse'—CASI 68.8 per cent, SAQ 69.2 per cent; ever had oral sex with a date—40.5 per cent, 43.6 per cent; ever had casual sex—39.0 per cent, 39.6 per cent; and ever drunk alcohol in the past year—87.6 per cent, 87.2 per cent. It was concluded that the method of interview, i.e. CASI or SAQ, was not a major influence on the results obtained.

### *Data Analysis*

SAQ data were double-entered using Microsoft Access 2003. CASI data were digitised and then merged with SAQ data before analysis using SPSS version 14. For the key outcome variable, i.e. whether respondents had ever had sexual intercourse, explanatory factors theoretically identified as potentially important were first assessed singly for significant association using contingency tables and Pearson chi-square tests. Stepwise logistic regression analyses were then undertaken to identify the best combinations of independent variables accounting for the outcome variable. Variables identified in the bivariate analyses as significantly associated with having ever had coitus

( $p < 0.05$ ) were candidate independent variables for these regressions. Adjusted odds ratios and associated 95 per cent confidence intervals were used to assess the importance of individual variables in models generated across the three social-educational sub-samples combined for each sex, and within each sub-sample for each sex.

## Results

### *Group Socio-Economic Backgrounds*

The three social-educational groups studied are differentiated by their educational foci, or lack of one. How, though, do their background socio-economic circumstances (the 'social' element in 'social-educational') compare? Table 1 shows basic socio-economic indicators—parents' combined monthly income, father's level of education and father's occupation level, i.e. skilled, semi-skilled or unskilled. Also shown are missing data levels as in some instances, sizeable proportions of respondents did not provide requisite information. This could be for a variety of reasons, but notably, levels of parental separation or divorce ranged from 10.2 per cent for general school/university females to 24.4 per cent for out-of-school males, and levels of fathers having died ranged from 7.3 per cent for general school/university males to 18.9 per cent for out-of-school males. Investigation linked missing socio-economic data strongly with absent father figures, although for parental income, ignorance of parents' financial circumstances seemed also to have been important.

Inability to provide a parental monthly income was high for the out-of-school and vocational school groups, especially the out-of-school females, but among those who did provide one, there was little difference by either group or sex. In all cases over 80 per cent of parents earned less than 25,000 Baht (830 USD), and the majority, less than 10,000 Baht (330 USD), a month. General school/university students could more often provide a parental income, and while the majority of both sexes again put it at below 25,000 Baht, much higher proportions gave higher figures, with more than one in five claiming a parental income above 50,000 Baht per month. The scenario by father's education was similar. The fathers of most, i.e. generally 60 per cent or more, of those who were out-of-school or who attended a vocational school had no more than primary education, with out-of-schoolers, especially females, being most likely to have fathers who were illiterate. By contrast, only about a quarter of general school/university respondents' fathers were primary-educated or, rarely, less, and almost half were college or university-educated, with most of these respondents belonging to the latter group. Data on father's occupation were gathered by providing examples of skilled, semi-skilled and unskilled occupations. All social-educational groups had substantial proportions in the semi-skilled category ('e.g. trader, farmer, office employee, middle-level civil servant'), with most others in the out-of-school and vocational groups classed as unskilled ('e.g. labourer, street vendor'). In the general school/university group, however, the remainder were predominantly skilled ('e.g. doctor, engineer, professor, company owner, high-level civil servant').

By socio-economic background, the general school/university group clearly stands apart from the other two groups, which have more in common. Having said that, the out-of-school group had more members, especially females, with illiterate fathers and more males whose fathers were unskilled. It was also set apart by its members—whether for lack of opportunity, lack of motivation or some other reason—having opted out of full-time



**TABLE 1**  
Socio-economic background characteristics of social-educational groups.

Socio-economic index	Social-educational group					
	Out-of-school		Vocational school		General school/ university	
	Males	Females	Males	Females	Males	Females
Parents' monthly income						
< 10,000 baht	51.0	52.9	51.8	56.4	24.9	22.4
10,000–24,999 baht	31.8	31.1	30.8	25.0	28.6	31.3
25,000–49,999 baht	9.9	9.4	13.7	9.9	24.9	25.6
50,000 baht or more	7.3	6.6	3.7	8.7	21.6	20.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Missing cases (%)	19.3	37.3	14.9	19.3	8.0	7.4
Father's education						
None	12.7	32.3	4.8	2.9	1.6	1.8
Primary	48.0	39.1	53.9	64.2	25.3	24.4
Lower secondary	14.9	8.9	15.8	11.8	11.3	11.9
Upper secondary	11.8	12.7	12.5	8.8	14.0	15.4
College or university	12.6	7.0	13.0	12.3	47.8	46.5
Total	100.0	100.0	100.0	100.0	100.0	100.0
Missing cases (%)	7.1	6.5	4.6	4.2	1.9	2.6
Father's occupation						
Unskilled	48.7	38.2	22.9	40.4	6.6	12.6
Semi-skilled	45.6	60.5	68.6	54.1	67.3	57.8
Skilled	5.7	1.3	8.5	5.5	26.1	29.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Missing cases (%)	4.2	10.1	8.1	13.7	1.9	3.0

education. Thus, as a 'social-educational' group, it ranked below the vocational school group, perhaps more on the basis of education than of socio-economic background.

### *Coital Experience*

By and large, although not without exception, males and females across the three social-educational groups, and the two sexes within groups, reported significantly different levels of coital experience (Table 2). Just over a third of all males had never had either sexual contact, i.e. genital touching of or by a partner, or sexual intercourse, while 1.9 per cent had had sexual contact only, and a little under two-thirds had had intercourse, i.e. vaginal or anal. By contrast, almost two-thirds of female respondents had never had either sexual contact or sexual intercourse, while 2.3 per cent had had sexual contact only, and a third, intercourse.

By social-educational background, out-of-school males, at 81.1 per cent, were the most likely group to have had intercourse, a significantly higher figure than for other groups of males and out-of-school females ( $p < 0.001$  in each case), and none had had only sexual contact. Two-thirds of vocational school males (68.7 per cent) had had intercourse and 2.7 per cent, sexual contact. Females in this group also reported high experience of sexual intercourse (62.6 per cent), with a further 2.8 per cent having had sexual contact. This is the social-educational stratum for which the gender difference in

TABLE 2

Sexual experience of adolescents by sex and social-educational group.

Sex and social-educational group	Ever had sexual contact or sexual intercourse?						Total	Standardised% had sexual intercourse**	
	Never had either		Had sexual contact only		Had sexual intercourse*				
	No.	%	No.	%	No.	%	No.	%	
Males									
Out-of-school	45	18.9	0	0.0	193	81.1	238	100	79.2
Vocational school	116	28.6	11	2.7	279	68.7	406	100	66.0
General school or university	163	62.2	6	2.3	93	35.5	262	100	37.4
Total	324	35.8	17	1.9	565	62.4	906	100	62.4
Females									
Out-of-school	76	45.0	4	2.4	89	52.7	169	100	49.3
Vocational school	73	34.6	6	2.8	132	62.6	211	100	62.5
General school or university	382	83.2	9	2.0	68	14.8	459	100	15.2
Total	531	63.3	19	2.3	289	34.4	839	100	34.4

\*All pairs of percentages for social-educational groups for a given sex, and male/female percentages for each social-educational group, are significantly different ( $p < 0.001$ ), except for the male/female vocational school and female out-of-school/vocational school comparisons, which are not significantly different ( $p > 0.05$ ).

\*\*Standardised to age distribution of total males or total females as appropriate.

coital experience is the smallest, and the only one for which, contrary to hypothesis, it is not statistically significant. Sampling limitations notwithstanding, this finding resonates with that of the Chiang Rai vocational school study (Liu *et al.* 2006; Manopaiboon *et al.* 2003a; Manopaiboon *et al.* 2003b; van Griensven *et al.* 2001), where male coital experience levels exceeded female levels, but by only modest margins.

Among out-of-school females, only 52.7 per cent had had intercourse, and a further 2.4 per cent, sexual contact. The former figure, however, reflects, in part, the 27 Hill Tribe virgins recruited from non-formal education centres, whose oversight by Catholic nuns had them professing Christianity. Omitting them, female out-of-school coital experience rises to 62.7 per cent, similar to, and not significantly different from, the level for vocational school females. There is thus no evidence, for females, of the postulated greater coital experience among out-of-schoolers than among vocational schoolers, although among 30 out-of-school females who were Buddhist, of northern Thai ethnicity and not engaged in non-formal education, 26 (86.7 per cent) had had intercourse. This sub-group obviously stands in stark contrast to the wholly virgin, Catholic, Hill Tribe out-of-school sub-group, and suggests more intricate social differentiation of coital experience than the core three-category model anticipates. It, at least, displays experience on par with out-of-school males, and significantly above vocational school females ( $p < 0.01$ ).

Respondents from the general school/university group reported easily the lowest levels of coital experience, significantly below those of the other groups, for both sexes ( $p < 0.001$  in all cases). Only 35.5 per cent of males had had intercourse (2.3 per cent

having had sexual contact), and just 14.8 per cent of females had had it (2.0 per cent having had sexual contact), indicating a significant gender difference as well ( $p < 0.001$ ). Standardising percentages with intercourse experience for age (to the age structure of the relevant sex across all social-educational groups) disturbs the pattern described above in detail, but not its substance (Table 2). The contrast between the marked gender differential for general school/university students and the lack of one for vocational school students is likely indicative of where the AIDS-induced pressure on young Thai women to assume CSWs' former role in male sexual initiation has been most keenly felt. While some young general school/university women have succumbed, most have resisted, probably driving male peers to seek to exploit status advantages over women of more modest familial circumstances and educational ambition. Data on the social-educational backgrounds of first coital partners were not collected, but this age-old tactic seems likely to have left young women further down the social hierarchy in double jeopardy, i.e. vulnerable to pressure from both within and above their own stratum.

There clearly are different sexual sub-cultures in different strata of Chiang Mai adolescent society, with those set on paths to university degrees and professional employment, especially females, behaving distinctly more conservatively than those with vocational educational aspirations. Out-of-school males, on the evidence available here, are even more widely sexually active, but the situation with out-of-school females is less clear. They are decidedly more often coitally experienced than general school/university peers and allowing for the sampling quirk noted earlier, may also be at least as experienced as vocational school counterparts, but given that even then, only 59 per cent compared to 80 per cent of male out-of-schoolers were recruited from public places, cf. non-formal education centres, this comparison could still be conservative and further research is called for. Gender disparity in premarital coital activity appears, however, pronounced higher up the adolescent social hierarchy, consistent with stronger adherence to cultural proscription for females.

### *Respondents Who Had Had Sexual Intercourse*

Coitally experienced respondents reported first having had intercourse at a mean age of 16.73 years. Males reported younger debut ages than females, with means of 16.55 and 17.03 years respectively ( $p < 0.001$ ). Out-of-school males had the youngest mean age at first coitus—15.97 years compared to 16.85 and 16.84 years, respectively, for vocational school and general school/university males ( $p < 0.001$ ). Out-of-schoolers also had the youngest female mean age at first intercourse of 16.48 years, as against 17.24 and 17.35 years, respectively, for vocational school and general school/university females ( $p < 0.001$ ). Thus, while out-of-school females may not have matched male counterparts in more often being non-virgin than those of their sex attending vocational schools, those who *had* had intercourse shared with them a distinctly younger mean age at debut. Debut partners were overwhelmingly described across all social-educational-sex groups as 'boyfriends' or 'girlfriends', and consistent with previous recent research, miniscule proportions of coitally experienced males had debuted with CSWs, the highest figure being 1.6 per cent for out-of-schoolers.

Mean numbers of lifetime sexual partners for the coitally experienced were 6.6 (median 4.0) for males and 3.5 (median 2.0) for females ( $p < 0.001$ ). Among males, the mean for the out-of-school group was 8.4 partners (median 5.0), compared to 6.2 (median

3.0) for those attending vocational schools and 4.2 (median 2.0) for the general school/university group ( $p < 0.05$ ). For females, the three means were 5.1 (median 3.0), 3.2 (median 2.0) and 2.0 (median 1.0) ( $p < 0.05$ ), respectively. Except among general school/university females, these numbers imply frequent partner turnover, with this increasing for both sexes as educational aspiration and socio-economic position diminish, perhaps partly as a function of earlier coital debut. Higher means than medians imply the existence of sub-groups who claimed well above average numbers of lifetime partners.

Almost 85 per cent of non-virgin respondents said that same-sex friends knew they had had intercourse, with males asserting this only slightly more often than females (87 per cent cf. 82 per cent). Both sexes were much less likely to report that parents (32 per cent of mothers and 24 per cent of fathers), siblings (23 per cent), other relatives (20 per cent) and teachers (six per cent) knew of their non-virgin status, and in all three social-educational groups, males' fathers, more often than females' fathers, knew of it ( $p < 0.05$ ). With the exception of males in respect of siblings, non-virgin general school/university students had more often concealed their coital experience from others than counterparts in the other two groups. For example, mothers of only 23 per cent of coitally experienced males and 19 per cent of coitally experienced females in this group knew their children were coitally experienced, compared to 34 per cent ( $p < 0.05$ ) and 38 per cent ( $p < 0.01$ ), respectively, in the out-of-school group, and 33 per cent ( $p < 0.05$ ) and 36 per cent ( $p < 0.05$ ), respectively, in the vocational school group. Seemingly, as well as being far less likely to have had intercourse, general school/university students were more discrete if they *had* had it, although clear majorities (79 per cent of males and 72 per cent of females) conceded same-sex peer awareness that intercourse had occurred.

### *Factors Associated With Having Had Intercourse*

Table 3 shows, by sex, crude odds ratios for bivariate relationships with having ever had intercourse across the three social-educational groups combined for variables considered potential determinants of loss of virginity on theoretical grounds. Having had intercourse was associated, for males, with being older than 17, and especially older than 19, studying in a vocational school or, particularly, being out-of-school compared to studying at a general school/university, being Buddhist as opposed to Christian, coming from a lower socio-economic status family, parents' relationship having ended through divorce or death, parental relationship being quarrelsome, family being of northern Thai ethnicity, and having drunk alcohol, smoked cigarettes, taken methamphetamines or smoked marijuana in the past year. Significant variables for females were similar, although the odds of being non-virgin did not rise for those aged over 19, and those for vocational schoolers exceeded those for out-of-schoolers. Additionally, intercourse experience was more likely if young women lived alone or with another family rather than with parents or relatives.

Stepwise logistic regression analyses were undertaken to isolate combinations of factors that best predicted whether or not adolescent males and females had had intercourse, both across all social-educational groups and within each of them. In each analysis, up to two models were constructed. In Model I, all bivariate-significant variables were entered as potential predictors. In Model II, variables not significant in Model I that gave rise to appreciable numbers of missing cases were excluded. This strategy was followed to maximise the numbers of cases on which final models were based, it having

**TABLE 3**  
Crude odds ratios for variables associated with having ever had sexual intercourse by sex.

Independent variable	Male ( <i>n</i> = 909)			Female ( <i>n</i> = 840)		
	<i>n</i>	% ever had sexual intercourse	Crude odds ratios (95% CI)	<i>n</i>	% ever had sexual intercourse	Crude odds ratios (95% CI)
Age						
17	85	28.2	1	136	11.8	1
18	301	62.8	4.29 (2.53–7.27)***	304	40.8	5.17 (2.92–9.13)***
19	364	65.9	4.92 (2.93–8.27)***	300	37.3	4.47 (2.52–7.91)***
20	156	71.8	6.47 (3.60–11.64)***	99	37.4	4.48 (2.31–8.68)***
Social-educational background						
General school or university	262	35.5	1	459	14.8	1
Vocational school	406	68.7	3.99 (2.87–5.55)***	211	62.6	9.61 (6.57–14.04)***
Out-of-school	238	81.1	7.79 (5.17–11.76)***	169	52.7	6.40 (4.30–9.51)***
Religion						
Buddhism	838	63.6	1	754	36.1	1
Christianity	53	45.3	0.47 (0.27–0.83)**	74	17.6	0.38 (0.20–0.70)**
Islam	12	50.0	0.57 (0.18–1.79)	6	16.7	0.35 (0.04–3.05)
Living situation						
Live with parent(s) or relatives	558	63.1	1	408	29.0	1
Live with other family	21	47.6	0.53 (0.22–1.27)	48	50.0	2.45 (1.35–4.47)**
Live with friends	235	59.6	0.86 (0.63–1.18)	239	33.9	1.26 (0.90–1.75)
Live alone	91	69.2	1.32 (0.82–2.12)	70	62.9	4.15 (2.46–7.01)***
Parents' monthly income						
25,000 baht or more	205	51.7	1	246	19.1	1
Less than 25,000 baht	576	66.0	1.81 (1.31–2.50)***	456	40.4	2.86 (1.98–4.14)***
Father's highest education						
College or university	201	52.2	1	244	22.5	1
Secondary school or lower	667	64.3	1.64 (1.20–2.27)**	564	38.5	2.15 (1.52–3.34)***
Mother's highest education						
College or university	173	48.6	1	207	20.8	1
Secondary school or lower	702	64.4	1.92 (1.37–2.70)***	617	37.9	2.33 (1.61–3.38)***
Father's occupation						
Skilled	112	52.7	1	144	13.9	1
Semi-skilled	535	59.8	1.34 (0.89–2.01)	448	31.0	2.79 (1.67–4.66)***
Unskilled	214	74.3	2.60 (1.61–4.20)***	188	50.5	6.33 (3.65–11.00)***

TABLE 3 (Continued)

Independent variable	Male (n = 909)			Female (n = 840)		
	n	% ever had sexual intercourse	Crude odds ratios (95% CI)	n	% ever had sexual intercourse	Crude odds ratios (95% CI)
Mother's occupation						
Skilled	69	58.0	1	107	17.8	1
Semi-skilled	463	59.4	1.06 (0.64–1.77)	431	30.6	2.05 (1.20–3.50)**
Unskilled	341	66.3	1.43 (0.84–2.42)	261	44.1	3.65 (2.10–6.34)***
Parents' marital status						
Married	636	57.5	1	630	30.6	1
Divorced	145	74.5	2.15 (1.44–3.23)***	102	45.1	1.86 (1.22–2.85)**
One or both dead	125	72.8	1.97 (1.29–3.02)**	107	46.7	1.99 (1.31–3.01)**
Quality of parental relationship growing up						
Parents never or sometimes quarrelled	776	59.4	1	717	30.7	1
Parents quarrelled quite often	67	77.6	2.37 (1.31–4.28)**	61	55.7	2.85 (1.68–4.83)***
Race/ethnicity of family						
Northern Thai	569	70.5	1	466	42.3	1
Thai—another region	116	55.2	0.52 (0.34–0.78)**	97	30.9	0.61 (0.38–0.98)*
Chinese	101	41.6	0.30 (0.19–0.46)***	107	24.3	0.44 (0.27–0.71)**
Hill Tribes	36	50.0	0.42 (0.21–0.83)*	58	13.8	0.22 (0.10–0.47)***
Other race	16	50.0	0.42 (0.16–1.04)	30	46.7	1.20 (0.57–2.51)
Mixed race	67	46.3	0.36 (0.22–0.60)***	81	17.3	0.29 (0.16–0.52)***
Ever drunk alcohol in past year?						
No	167	24.0	1	372	14.0	1
Yes	735	71.2	7.83 (5.31–11.56)***	466	50.6	6.31 (4.47–8.91)***
Ever smoked in past year?						
No	493	45.2	1	715	27.0	1
Yes	408	83.3	6.05 (4.42–8.30)***	120	77.5	9.32 (5.89–14.75)***
Ever taken methamphetamines in past year?						
No	756	56.1	1	795	31.7	1
Yes	142	94.4	13.12 (6.34–27.15)***	40	82.5	10.16 (4.34–23.28)***
Ever used marijuana in past year?						
No	763	57.7	1	820	33.3	1
Yes	135	87.4	5.10 (3.00–8.64)***	13	92.3	24.04 (3.11–185.87)***

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

been noted (Table 1) that certain parental attributes, which fortuitously ultimately proved unimportant, gave rise to sizeable numbers of missing cases. It was vital to include as many of these cases as possible, given that missing parental data were often associated with non-intact parental relationships. Stepwise logistic regression eliminated any case missing on any independent variable, whether ultimately included in the model generated or not. As parental marital dissolution was a hypothesised determinant of adolescent coital

experience, it was not desirable to omit cases where it featured in respondents' backgrounds.

Among males, Model II featured seven variables (Table 4). The odds of a male 17–20 year-old having had intercourse increased significantly if he was a vocational school student or was out-of-school, if he was older than 17 and especially, aged 20, if his parents were divorced, and if, in the year prior to interview, he had drunk alcohol, smoked or taken methamphetamines. They were reduced if he was of Hill Tribe or mixed race, compared to

**TABLE 4**

Logistic regression analysis of variables associated with males having ever had sexual intercourse.

Independent variable	Model I	Model II
	Adjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Age		
17	1	1
18	2.69 (1.30–5.57)*	2.65 (1.40–5.00)**
19	2.79 (1.36–5.72)*	2.57 (1.35–4.87)**
20	4.03 (1.75–9.25)**	3.93 (1.89–8.19)***
Social-educational background		
General school or university	1	1
Vocational school	1.91 (1.23–2.95)*	1.69 (1.11–2.53)**
Out-of-school	3.26 (1.76–6.03)***	2.29 (1.35–3.87)**
Parents' marital status		
Married	1	1
Divorced	1.34 (0.73–2.47)	1.87 (1.16–3.03)**
One or both dead	2.26 (1.14–4.51)*	1.67 (1.00–2.80)
Race/ethnicity of family		
Northern Thai	#	1
Thai—another region		0.66 (0.40–1.08)
Chinese		0.60 (0.34–1.03)
Hill Tribes		0.35 (0.16–0.76)*
Other race		0.55 (0.18–1.70)
Mixed race		0.47 (0.25–0.90)*
Ever drunk alcohol in past year?		
No	1	1
Yes	3.61 (2.19–5.93)***	3.78 (2.42–5.91)***
Ever smoked in past year?		
No	1	1
Yes	2.56 (1.66–3.92)***	2.50 (1.71–3.66)***
Ever taken methamphetamines in past year?		
No	1	1
Yes	4.42 (1.87–10.48)**	5.22 (2.34–11.67)***

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

#Not significant in Model I; became significant in Model II after addition of cases missing on parental variables not significant in Model I.

Model I: includes all variables significant in bivariate setting that remained significant after stepwise regression; missing cases = 225/909.

Model II: repeats Model I after eliminating non-significant parental variables that were sources of missing cases (parents' income, mother's/father's education, father's occupation and quality of parental relationship when growing up); missing cases = 18/909.



northern Thai, ethnicity. The emergence of social-educational group, coupled with the washing out of the entire suite of parental income, education and occupation variables, confirms the former's effectiveness as a broad socio-economic indicator and endows the study's core categorisation of adolescents with credibility. In addition, it highlights the restraining impact on sexual activity of adherence to traditional Thai cultural norms, and the prioritising of educational attainment, among general school/university students and their parents. It is expected that proportions with intercourse experience should rise with age, coital debut being a cumulative phenomenon with age. The emergence of parental divorce in Model II, after including 207 cases excluded from Model I due to missing parental socio-economic data, can be placed alongside the statistical significance of parental death in Model I, and its near significance in Model II. As hypothesised, parental marital dissolution seems to increase the odds of young Thai males initiating coitus. The other variables generating odds ratios significantly larger than unity are clearly indicative of lifestyle choices, i.e. alcohol consumption, smoking and drug-taking, playing a key role in young males being sexually active.

Among females, Model II featured six variables, notably excluding age (Table 5). Bivariate odds of females having intercourse experience (Table 3) did not increase with age as they did among males, except between ages 17 and 18 where heavy concentration of 17-year-olds in the general school/university group probably suppressed the variable in multivariate analysis. While sampling error cannot be discounted, the suggestion is that most young women who had surrendered their virginity had done so relatively young, and that those who had resisted male peers' overtures to age 18 had generally continued the resistance as 19- and 20-year-olds. Being in a vocational school or being out-of-school again significantly raised the odds of having had intercourse compared to being in a general school or university, and the socio-cultural interpretation advanced for males is again valid. The role of day-to-day parental oversight in preserving female chastity is evident in the emergence of living situation, with the odds of having had intercourse rising significantly for women who lived alone or with another family rather than with parents or relatives. A dysfunctional family background, as indexed by parents having 'quite often' quarrelled as young women grew up, was another significant risk factor for coital experience, as were the lifestyle variables focused on alcohol and smoking. Young women whose social lives entailed drinking and/or smoking were, independently of other threats to their virginity, at much greater odds of also being coitally active.

Ethnicity, finally, again emerged, and it was the same two ethnic groups as among males, i.e. persons of Hill Tribe and mixed race ethnicity, that exhibited significantly lower odds than the dominant northern Thai group of having had intercourse. There could be a religious element to this result, since female Hill Tribe respondents were mostly the Christian out-of-schoolers supervised by Catholic nuns. Christian religious faith significantly lowered the bivariate odds of a young woman being no longer virgin (Table 3), but was suppressed in logistic regression modelling, probably by its close association with ethnicity. Whether either independent variable, or the close supervision of some young women's social activities by nuns, is what really counted is a moot point.

Bivariate and logistic regression analyses were also conducted to model determinants of males and females having had intercourse *within* each social-educational group. Tables are not presented, but are available from the first author. In all but one case, only one multivariate model was generated, as only for female general school/university students were any parental socio-economic attribute variables bivariate-significant.

**TABLE 5**  
Logistic regression analysis of variables associated with females having ever had sexual intercourse.

Independent variable	Model I	Model II
	Adjusted odds ratio (95% CI)	Adjusted odds ratio (95% CI)
Social-educational background		
General school or university	1	1
Vocational school	4.94 (2.90–8.43)***	4.79 (3.03–7.57)***
Out-of-school	4.71 (2.44–9.12)***	4.26 (2.43–7.48)***
Living situation		
Live with parent(s) or relatives	1	1
Live with other family	2.56 (0.82–8.00)	2.56 (1.09–6.04)*
Live with friends	1.19 (0.72–1.96)	1.33 (0.85–2.08)
Live alone	3.08 (1.35–7.02)**	3.16 (1.59–6.29)**
Quality of parental relationship growing up		
Parents never or sometimes quarrelled	1	1
Parents quarrelled quite often	3.91 (1.72–8.84)**	2.82 (1.46–5.46)**
Race/ethnicity of family		
Northern Thai	1	1
Thai—another region	0.87 (0.43–1.75)	0.80 (0.44–1.46)
Chinese	0.66 (0.30–1.46)	0.67 (0.34–1.30)
Hill Tribes	0.26 (0.64–1.08)	0.17 (0.06–0.47)**
Other race	0.90 (0.22–3.65)	1.03 (0.36–2.99)
Mixed race	0.35 (0.15–0.85)*	0.34 (0.16–0.76)**
Ever drunk alcohol in past year?		
No	1	1
Yes	3.98 (2.38–6.65)***	3.71 (2.39–5.75)***
Ever smoked in past year?		
No	1	1
Yes	3.84 (1.97–7.51)***	3.49 (1.97–6.02)***

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

Model I: includes all variables significant in bivariate setting that remained significant after stepwise regression; missing cases = 243/840.

Model II: repeats Model I after eliminating non-significant parental variables that were sources of missing cases (parents' income, mother's/father's education and mother's/father's occupation); missing cases = 76/840.

Among out-of-schoolers, lifestyle variables, i.e. smoking and methamphetamine use among males, and smoking and alcohol consumption among females, significantly raised the odds of being sexually experienced ( $p < 0.01$  in all cases), and so did being older than 17 for males ( $p < 0.05$ ), while being a Christian male ( $p < 0.05$ ) or a Hill Tribe female (most being also Christians) ( $p < 0.001$ ) significantly reduced those odds. Christian religion and Hill Tribe ethnicity were bivariate-significant for both sexes; in controlling each for the other, opposite variables emerged dominant in multivariate analysis. However, the major discriminant within this social-educational group for both sexes was a lifestyle that implied risk-taking on other fronts, considerable focus on socialising with peers, and probably limited parental scrutiny and control.

Vocational school males were significantly more likely to have had intercourse if they smoked ( $p < 0.01$ ) and drank ( $p < 0.001$ ), and again less likely to have done so if they were Christian ( $p < 0.05$ ). Females attending vocational schools were particularly likely to be non-virgins if they drank ( $p < 0.01$ ), with living alone only marginally failing to attain

significance at the 0.05 level. Age was not a significant determinant, even in bivariate analysis, of intercourse experience within this group, few of whom were as young as 17.

Among male general school/university students, smoking ( $p < 0.05$ ) and drinking ( $p < 0.001$ ) were again multivariate risk factors for coital experience, as was parental marital dissolution by either divorce or death ( $p < 0.01$  in both cases). Reflecting a bivariate result that saw only 23 per cent of 62 Chinese general school/university males compared to 48 per cent of 122 ethnically northern Thai having had intercourse ( $p < 0.001$ ), Chinese or mixed race, probably mainly Thai-Chinese, ethnicity significantly lowered the odds of having had intercourse ( $p < 0.01$  in both cases). This suggests that the imperative Chinese parents place on sons' academic achievement powerfully dissuades early sexual experimentation. Female general school/university students were more likely to have lost their virginity if they smoked or drank ( $p < 0.001$  in both cases), had grown up in a discordant parental relationship ( $p < 0.01$ ), or had parents with monthly incomes below 25,000 Baht ( $p < 0.05$ ). Living alone and having mothers with semi-skilled or unskilled occupations were also bivariate-significant, but were suppressed in multivariate analysis, perhaps largely by parental income. Chinese ethnicity was not the behavioural determinant for females it was for males.

### *Postscript—Sexual Coercion*

The overwhelming predominance of non-CSW peer partners at male sexual debut among our respondents raises the issue of coercion in adolescent coital encounters. Morrison (2004) and Vuttanont *et al.* (2006) have observed the parlous situation nowadays confronting young Thai females, i.e. managing a new concept of dating with neither parental support nor the life skills to deal with their own desires, much less the coercive tactics of boyfriends. In the words of Morrison (2004), whose research was also set in Chiang Mai, 'young women are juggling traditional values and a newer, more socially and sexually permissive environment' (p. 340). In the present study, a quarter (26.4 per cent) of non-virgin females across all social-educational groups considered they had ever been forced, physically or psychologically, to have intercourse against their will. The experience was reported most frequently by non-virgin, out-of-school females (33.7 per cent), and least often by non-virgin, vocational school females (22.0 per cent). First coercive experiences had coincided with first coitus in 71 per cent of cases across all social-educational groups, implying that almost one in five first coital experiences was perceived as having been coerced.

## **Discussion**

Literature reviewed early in this paper traced several recent trends in the sexuality of Thai youth to a point with which present findings concur. Due to HIV/AIDS, male sexual initiation by CSWs is a pattern of the past and is rare nowadays. Historically high levels of female acknowledgement of sexual intercourse experience, along with assertions of physical and psychological coercion, then bear testimony to the pressure ordinary young women have come under to fill the void, in a society where older generations, and political and bureaucratic elites, still preach female premarital chastity. Although undermined, this cultural expectation retains considerable influence higher up

the social hierarchy, where university education is a priority. Consequently, the adolescent female vocational school and out-of-school populations appear to have borne the brunt of the pressure, and coital activity is now common among them.

Dividing 17–20-year-old Thais in Chiang Mai City into three social-educational groups, we have examined, by sex, their experience of sexual intercourse. We hypothesised that non-virginity would rise, moving from academically focused general school/university students through vocational school students to young people who had abandoned full-time education, and that due to a double standard in premarital sexual morality, it would be higher for males within each group. The former expectation was confirmed for males, but while general school/university females were decisively the least likely to have had coitus, it was not clear if their vocational school and out-of-school peers had behaved differently from each other. Due to sampling limitations, this remains an open issue. The expected gender disparity was evident in the general school/university group, but not in the vocational school group, probably because vocational school females were under pressure for sexual favours from general school/university males as well as from males within their own stratum, the former finding in-group peers mostly uncooperative. Within the out-of-school group, sampling concerns made the disparity found of uncertain authenticity. Coitally active out-of-schoolers had, however, been significantly younger at debut, and had had more partners than vocational schoolers, who had had more partners than general school/university students. The former finding may implicate early school leaving, lack of vocational aspiration and a consequent focus on social life in early coital debuts.

In analyses of the determinants of loss of virginity, by sex, social-educational group proved to be a good summary index of familial background, conveniently washing out all parental income, education and occupation measures. Other postulated determinants were older age, lifestyle indicators covering smoking, alcohol consumption and drug-taking, ethnic and religious indicators that might bear on adherence to cultural mores governing sexual behaviour and/or intensity of focus on educational goals, measures of parental marital dissolution and disharmony, and for females, the degree of parental oversight afforded by living arrangements.

In regression modelling, social-educational group essentially set the more conservative general school/university group apart from the others, which were shown by analysis of core parental socio-economic status measures to have much in common. Increasing age raised the odds of males having had intercourse, net of other factors, across all social-educational groups and within the out-of-school group, but among females, it was not significant. This suggests that if young unmarried women surrender their virginity, they typically do so relatively young, and if they manage to resist male peers' overtures to the age of 18, they generally continue to do so beyond that age. Arguably, this reflects the strength of the Thai cultural proscription on female premarital sexual activity.

Variables tying coital experience to lifestyles that also entail other risk behaviours stood out strongly in modelling across and within all social-educational groups for both sexes. Thus, smoking, alcohol consumption and the use of methamphetamines by males, and smoking and drinking among females, strongly predisposed them to having had intercourse. Smoking and methamphetamine use among out-of-school males, and smoking and drinking among vocational school and general school/university males, predicted non-virginity, as did alcohol consumption among all three groups of females and smoking among all but vocational school females. Several previous Thai studies have

also implicated these indulgences in accelerating coital debut, and the type of social existence that fosters them is clearly very important in generating desire, opportunity and risk. VanLandingham *et al.* (1993) associated heavy drinking with male premarital debut, especially among students compared to soldiers and clerks. Attaveelarp (2001) found that smoking and patronage of entertainment houses raised the odds of having had intercourse among male Grade 10–12 students in Phuket Province, and Podhisita *et al.* (2001) showed frequent clubbing and alcohol consumption, along with strong peer influence, to be major predictors of young male, but not female, loss of virginity. Using the Chiang Rai dataset, Allen *et al.* (2003) and Liu *et al.* (2006) linked sexual initiation among female vocational school students to a dancing/drinking lifestyle, heavy drinking, and marijuana and methamphetamine use, while Liu *et al.* (2006) also associated male initiation with dancing and drinking, smoking and methamphetamine use. Finally, Sriputphong (2006) found the odds of having had premarital intercourse significantly raised for secondary school students of both sexes whose levels of ‘peer socialisation’ were high.

Ethnic minorities emerging in the present study with especially low odds of being sexually active compared to the dominant northern Thai group seem to have highlighted two forces for restraint—Christian religious faith and Chinese ethnicity. The former is possibly exaggerated due to the quirk in sampling out-of-school females via non-formal education centres. Conceivably, the key is less Christianity *per se* than close supervision of social behaviour by Catholic nuns. The latter was operative only among general school/university males, and captured the educational imperative Chinese-Thai parents impress upon their sons. This is arguably a unique source of restraint on the sexual behaviour of adolescent Thai males, contrasting with a more general parental restraint imposed on adolescent females of all ethnic backgrounds in the same social-educational group for reasons of cultural propriety and family honour more than academic attainment.

It is intriguing that modelling across all social-educational groups points to parental marital dissolution as a male risk factor for loss of virginity, but a discordant (quarrelsome) parental relationship being important for females. The absence of a parent and perhaps, in particular, a father figure, seems to have increased the odds of a young male having initiated coitus, whereas young women seem to have been more affected by open parental conflict. These relationships also emerged strongly in separate modelling for the general school/university group, suggesting that it is at the upper end of the socio-economic spectrum that their impact is most pronounced. It may be that parental marital disruption elevates the odds of young males becoming coitally active by reducing control over their social activities, and perhaps also adversely affecting their mental health, while parental discord could drive young women to seek more companionate relationships of their own, which they are then keen to preserve at all costs, including by acceding to requests for intercourse. These forces may be particularly strong in the general school/university group, because there, they undermine otherwise very strong parental commitments to male educational achievement and female premarital chastity.

The hypothesis that young women living independent of day-to-day parental oversight would be more likely to have lost their virginity was substantiated across all social-educational groups combined, but within groups, this relationship approached significance only for vocational school students. Independent living did, however, also

bear a strong bivariate relationship with being non-virgin for general school/university females, and may have been suppressed in multivariate modelling by a strong link with having quarrelsome parents and/or low parental income. General school/university females were the only group within which any measure of parental socio-economic status was statistically significant, and it does appear that young women in this group whose parents were less well-off, and who may, therefore, like vocational school females, have been targets of better-off males trading status for sex, had disproportionately failed to preserve their chastity.

In conclusion, this study has shown that there are multiple adolescent sexual cultures in contemporary Thailand. They can, to a degree, be defined by gender and the tripartite social-educational classification adopted, but analysis does also point to more intricate differentiation within these groups based on variables such as ethnicity and religion, for example, Chinese males within the general school/university group and Buddhist northern Thai females within the out-of-school group. Further research to better identify and separately understand cultures is in order, so that the sexual health needs of each can be appropriately targeted and catered for by policy-makers. A future similar study, besides ideally employing demonstrably random sampling, would also do well to gather data on debut partners' social-educational statuses, so that the extent to which higher status males obtain coital experience further down the social hierarchy can be directly investigated.

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