

SEXUAL COERCION AMONG ADOLESCENTS IN NORTHERN THAILAND : PREVALENCE AND ASSOCIATED FACTORS

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Abstract. Sexual coercion was assessed in a cross-sectional survey of drug use and sexual behavior in vocational school students from Chiang Rai, Thailand (n = 1725; ages 15-21), using audio-computer assisted self-interview. Sexual coercion was reported by 6.5% of males and 21% of females. Mean age at first occurrence was 16 years (range 8-20) among males and 17 years (range 5-21) among females. Most perpetrators were male (52% among males; 98% among females) and known by the participants. Among females, associated factors were history of pregnancy, selling sex, marijuana use, perceived risk of STD, two or more lifetime sexual partners, and living away from family. Among males, associated factors were homo- or bisexual self-identification, parents living together, and ulcerative STD history.

INTRODUCTION

Sexual coercion has been linked to a variety of negative outcomes such as psychiatric symptoms, poor school performance, and conduct problems (Bartholow *et al*, 1994; Kline *et al*, 1994; Johnsen and Harlow, 1996; Holmes and Slap, 1998); among adolescent girls, it has been associated with pregnancy (Zierler *et al*, 1991) and abortion (Wingood and DiClemente, 1997). Sexual coercion also may increase adolescents' risk for infection with human immunodeficiency virus (HIV) and other sexually transmitted diseases (STDs). Sexual abuse directly leads to HIV/STD infection if the perpetrator is infected. It also may predispose one to behavioral risk factors for HIV and STD, such as increased frequency of unprotected sex (Lyon *et al*, 1995). While sexual coercion appears related to a variety of sexual and mental health outcomes, the consequences of sexual coercion vary widely and may be related to the circumstances and intensity

of the coercion and the life circumstances of the person who has been coerced (Rind *et al*, 1998).

Prevalence estimates for childhood or adolescent sexual coercion are available for the Western countries, however, few reliable estimates of sexual coercion have been obtained in the rest of the world (Maman *et al*, 2000), where most young people live (UNAIDS, 1998). In Thailand, the occurrence of sexual coercion has not been well described; most available information is from newspapers, expert opinion, or anecdotal reports. Obtaining reliable estimates of sexual coercion among Thai populations and exploring associated conditions and possible outcomes is particularly important given Thailand's changing social norms and its significant HIV epidemic.

Sexual mores in Thailand have been undergoing significant changes in recent decades which may effect the circumstances where coercion can occur (Xenos *et al*, 1993; Ford and Kittisuksathit, 1994; 1996; Cash, 1995; Podhisita and Pattaravanich, 1995; Klausner, 1997). Virginity at marriage is no longer expected among young Thai women (Podhisita and Pattaravanich, 1995), although it remains 'impolite' for young women to initiate or discuss sexual matters (Ford and Kittisuksathit, 1994; 1996; Havanon, 1996;

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Knodel *et al.*, 1996). There also has been a trend toward seeing premarital relationships as friendships with shared interests and pastimes (Im-Em, 1999), in contrast to the gender-segregated social spheres that were common in the past (Knodel *et al.*, 1996). Nonetheless, there remains a belief that men have stronger sexual drives than women, and that women should behave in ways that curb these drives in male-female relationships (Knodel *et al.*, 1996; van Landingham *et al.*, 1998). In the past, sex workers were considered an acceptable sexual outlet for young men (Havanon *et al.*, 1993; Knodel *et al.*, 1996), however, since the onset of the HIV epidemic, sex work patronage has declined and premarital sex is more likely to occur with girlfriends or other non-commercial partners (Celentano *et al.*, 1998; Kitsiripornschai *et al.*, 1998; Jenkins *et al.*, 1999). This changing context, along with the persistence of beliefs about differences in sexual drive and differences in gender roles regarding initiation of sexuality, may create many situations where sexual coercion can occur, particularly for young women. There are, of course, other contexts where sexual coercion (*eg.*, among family, with strangers) can occur and these also need to be investigated.

To determine the prevalence of sexual coercion, and associated factors, among adolescents in northern Thailand, we assessed male and female vocational students in Chiang Rai, a province in Northern Thailand that has reported some of the the highest HIV infection rates in Asia (Kilmarx *et al.*, 2000). Vocational schools enroll students at an age near their sexual debut and provide an important insights into the sexual behavior of Thai youth. This study evaluated the history of sexual coercion as part of a cross-sectional survey of sexual, health, and substance use behavior. This allowed us to investigate factors that have been associated with sexual coercion in other countries, including unprotected intercourse; STDs; unplanned pregnancy; substance use; family structure; social resources such as confidants; and mental health. It was expected that associations between sexual coercion and these factors would help us better understand the context and potential consequences of sexual coercion for young Thai adults.

MATERIALS AND METHODS

Study population and enrollment

A systematic sample of 1,725 students (aged 15 to 21 years), who attended three vocational schools in Chiang Rai Province, was enrolled into a cross-sectional survey of sexual and substance use behaviors. The methods have been reported in detail elsewhere (van Griensven *et al.*, 2001). In brief, the study was explained during classroom-based sessions and those willing to participate were asked for written informed consent. No names or personal identifiers were collected. Equal enrollment quotas were set for males and females and for each of the six grades. The study protocol was approved by the Ethical Review Committee of the Thai Ministry of Public Health and by the Institutional Review Board of the United States Centers for Disease Control and Prevention.

Data collection and instruments

Questionnaires were developed based on previous research, social behavioral theory and focus group discussions with vocational school students in Chiang Rai. Items covered socio-demographic characteristics; knowledge, attitudes, and beliefs regarding HIV and STD; contraceptive practices; drug use; and sexual experiences including history of sexual coercion.

Because questions involved sensitive behaviors such as sex and drug use, audio-computer assisted self-interview (ACASI) was used for data collection. ACASI, compared with face-to-face interviews, has been shown to decrease underreporting and to increase the validity and reliability of data regarding sexual behavior, drug use, violence, and pregnancy (Turner *et al.*, 1998; Des Jarlais *et al.*, 1999; Metzger *et al.*, 2000).

Assessment of sexual coercion

Sexual coercion was defined as being physically or mentally forced to have sexual contact or sexual intercourse against one's will. History of sexual coercion was assessed by a question worded, "Have you ever been coerced (physically or mentally) to have sexual contact or sexual intercourse against your will?" (Table 1). Students who answered "yes" were asked their

age at first occurrence, sex of the perpetrator(s), whether intercourse was involved, whether condoms were used (at first occurrence), number of times coerced, number of perpetrators, estimated frequency of condom use if coercion involved intercourse, and relationship of the perpetrator(s) to the respondents.

Statistical analyses

Associations between sexual coercion and the following factors were evaluated: sexual behavior such as selling sex and current condom use, sexually transmitted diseases, unplanned pregnancy; substance use; family structure; social resources such as confidants; depressive symptoms (5-item scale: pessimism, absence of energy, feeling down, feeling bored with life, or feeling lonely during the past 3 months; Cronbach's alpha = 0.70), perceived HIV (2-item scale: risk of getting HIV, worry about getting HIV; Cronbach's alpha = 0.62); and perceived STD risk (2-item scale: risk of getting STD, worry about getting STD; Cronbach's alpha = 0.72). All scales were dichotomized for purposes

of data analysis. Univariate associations between variables were assessed using the chi-square test. Odds ratios (OR) and 95% confidence intervals (CI) were calculated for these associations.

RESULTS

Participant characteristics

Of 1,736 students who were offered enrollment in the study, 1,725 agreed to participate (99.4% enrollment rate), of whom 52% were male. The mean age was 18 years. Most were from agricultural families; most had been born in northern Thailand, and the majority lived with their parents (Table 1).

Sexual experience

Of the total study population, 17% reported that they had had sexual contact but not sexual intercourse, and 46% reported that they had had sexual intercourse at least once. Males were more likely than females to be sexually experienced but this was not statistically significant (Table 1). About 10% of participants identified

Table 1
Demographic characteristics and sexual experience of adolescents in three vocational schools in Chiang Rai, Thailand (n =1,725).

Characteristic	Male n=893	Female n=832
Age in years, mean (median)	18.5 (18)	18.4 (18)
Northern Thai (%)	92.7	94.8
Father is farmer (%)	66.3	66.3
Live with parents (%)	61.8	57.1
Sexual experience		
No sexual contact or intercourse (%)	33.8	41.6 ^a
Sexual contact ¹ only (%)	17.9	15.3
Mean age at first sexual contact (years)	16.0	17.0
Sexual intercourse ² (%)	48.3	43.1
Mean age at first sexual intercourse (years)	17	18
Homo-or bisexual ³ (%)	9.1	11.1
Ever sold sex (%)	2.7	3.1
Sexually coerced ⁴ (%)	6.5	21.0 ^b

¹Defined as erotic stimulation of genitals, including oral sex, but not anal or vaginal penetration.

²Defined as penile penetration of the vagina or anus.

³Defined as identifying oneself as homosexual or bisexual or feeling sexually attracted to the same sex.

⁴Defined as being physically or mentally forced to have sexual contact or sexual intercourse against one's will.

^ap < 0.01, ^bp < 0.001, males *versus* females by χ^2 test.

themselves as homosexual or bisexual or felt sexually attracted to the same sex. About 3% of both males and females reported that they had ever sold sex.

Prevalence and background of sexual coercion

Sexual coercion was reported by 13.5% of the participants. Females were significantly more likely to report sexual coercion than were males (21% vs 6.5%, Table 1). Sexually experienced females (n=359) were also more likely to report coercion than were sexually experienced males (n = 431); 36% vs 7%; χ^2 (df=1) = 98.70; p < 0.001. Among those who were coerced, the mean age at first occurrence was 16.7 years, (range = 5-21 years in females; 8-20 years in males) (Table 2). The first episode was significantly more likely to occur before 15 years of age for males (31%) than for females (6.3%). Males were the perpetrators for almost all of the women and half of the men. In about one third of the males and half of the females, first coercion

involved sexual intercourse. For any coercion that involved intercourse, condoms were used less than 50% of the time, placing those coerced at greater risk of contracting STD and HIV. In general, most coercion occurred with a person the participant knew, such as a sexual partner, acquaintance or family member, although some significant gender differences were present. Females were significantly more likely to be coerced by their steady or casual sexual partners (73% vs 48% of males) and males were significantly more to be coerced by family members (17% vs 7% of females). There does not appear to be a significant gender difference for coercion by strangers.

Factors associated with sexual coercion

Table 3 outlines the univariate associations between sexual coercion and factors related to mental and sexual functioning. Among females, sexual coercion was significantly associated with methamphetamine and marijuana use, having had two or more lifetime sexual partners, and sell-

Table 2
History and context of coercion from respondents who reported ever being sexually coerced (n = 233).

Sexual coercion history	Male (n=58)	Female (n=175)
Mean age at first occurrence, years (SD, range)	16 (2.5, 8-20)	17 (2.1, 5-21)
Coerced by male (%)	51.7	98.3 ^c
Age when first coerced		
<15 years (%)	31.0	6.3 ^c
15-21 years (%)	69.0	93.7 ^c
Intercourse involved at first occurrence (%)	31.0	51.4 ^b
Condom used at first occurrence (%) ¹	27.8	28.9
Any coercion with intercourse (%)	41.3	69.1 ^c
Always used a condom ² (%)	41.7	24.0
Mean no. of times coerced for intercourse ² (SD, range)	1.0 (2.2, 0-12)	1.7 (2.2, 0-10)
Mean no. of different males who coerced for intercourse ² (SD, range)	2.2 (5.6, 0-28)	1.3 (1.1, 0-10)
Ever coerced by ³ :		
Sexual partner (steady or casual) (%)	48.3	73.1 ^c
Family member (%)	17.2	6.9 ^a
Acquaintance (%)	46.6	34.9
Stranger (%)	32.8	22.3

¹Among those who reported intercourse on first occurrence of coercion (male n = 18; female n = 90).

²Among those who reported intercourse on any occurrence of coercion (male n= 24; female n = 121).

³More than one answer allowed

^ap < 0.05, ^bp < 0.01, ^cp < 0.001, males versus females by χ^2 test

Table 3
Univariate analysis of factors associated with sexual coercion (n = 1725).

Risk factors	Male (No.)	% Coerced	OR (95% CI)	Female (No.)	% Coerced	OR (95% CI)
Ever drank alcohol						
≥3 drinks at one time	780	6	0.5 (0.2-1.4)	572	24	1.1(0.6-1.9)
<3 drinks at one time	46	11	ref	77	21	ref
Ever used methamphetamine						
Yes	350	7	1.3 (0.7-2.1)	150	32	2.1 ^a (1.4-3.0)
No	543	6	ref	682	19	ref
Ever used methamphetamine to lose weight						
Yes	84	14	2.7 ^a (1.4-5.4)	78	33	2.0 ^a (1.2-3.3)
No	809	6	ref	754	20	ref
Ever smoked marijuana						
Yes	192	7	1.0 (0.5-2.0)	30	57	5.3 ^a (2.5-11.2)
No	701	6	ref	802	18	ref
Self-reported history of ulcerative STD						
Yes	123	14	2.8 ^a (1.5-5.2)	87	38	2.6 ^a (1.6-4.1)
No	770	5	ref	745	19	ref
Ever pregnant (female)						
Yes	-	-	-	100	47	4.1 ^a (2.7-6.5)
No				732	18	ref
Homosexual/bisexual self-identification						
Yes	81	26	7.3 ^a (4.0-13.3)	93	32	1.9 ^a (1.2-3.1)
No	812	5	ref	739	20	ref
Number of sex partners (casual and steady) during lifetime						
≥2	539	8	1.9 ^a (1.0-3.5)	379	31	2.9 ^a (2.0-4.1)
<2	354	4	ref	453	13	ref
Ever sold sex						
Yes	24	25	5.2 ^a (1.9-13.7)	26	62	6.5 ^a (2.8-14.6)
No	869	6	ref	806	20	ref
Current condom use with steady/casual partners						
Yes	50	81.2 (0.4-3.6)	24	463.3 (1.4-7.5) ^a		
No	843	6	ref	808	20	ref
Have someone in the family to talk to						
No	191	9	1.7 (0.9-3.0)	194	29	1.7 ^a (1.2-2.5)
Yes	702	6	ref	638	19	ref
Have a friend to talk to						
No	88	7	1.0 (0.4-2.5)	47	21	1.0 (0.4-2.0)
Yes	805	7	ref	785	21	Ref
Live in boarding house or rented room						
Yes	265	7	1.2 (0.7-2.2)	271	28	1.8 ^a (1.3-2.6)
No	628	6	ref	561	17	Ref
Parents separated						
Yes	169	3	0.3 ^a (0.1-0.9)	189	26	1.5 ^a (1.0-2.1)
No	724	7	ref	643	19	ref
Perceived risk of STD						
High to very high	24	17	3.0 (0.9-9)	29	48	3.7 (1.7-7.8) ^b
Low to intermediate	864	6	Ref	803	20	ref
Perceived risk of HIV						
High to very high	84	14	2.7 (1.4-5.4) ^a	62	34	2.0 (1.1-3.5) ^a
Low to intermediate	809	6	Ref	970	20	ref
Depression symptoms						
High	248	8	1.2 (0.7-2.2)	366	25	1.4 (1.0-2.0) ^a
Low	645	6	Ref	466	18	ref

^ap < 0.05; OR = odds ratio; CI = confidence interval.

^bp = 0.001

ing sex (Table 3). Current condom users, however, were more likely to report a history of sexual coercion compared to those who did not use condoms. History of ulcerative STD (genital ulcer diseases) and pregnancy also were related to sexual coercion, as did homosexual or bisexual self-identification. Living and family situations such as living away from their family and feeling that they had no one in their family to talk to were associated with sexual coercion among females. Perceived risk of HIV and STD, and symptoms of depression were all associated with sexual coercion.

Among males, univariate analyses indicated that sexual coercion had significant associations with the use of methamphetamine to lose weight and having ever sold sex (Table 3). Males who identified themselves as homosexual or bisexual were more likely to report sexual coercion, as were those who reported a history of ulcerative STD. Males whose parents lived together had higher prevalence of a history of coercion. Perceived risk of HIV and STD was related to a history of sexual coercion.

Variables which were significant ($p < 0.05$) in univariate analysis and those that appeared

relevant to sexual coercion (eg, presence of confidants, mental health variables) were included in the multivariate model. Multivariate analyses were performed using a backward stepwise logistic regression analysis using SPSS (Statistical Package for Social Sciences, version 10) with the p-value for removal set at 0.2.

Among females, the multivariate analysis indicated that a history of sexual coercion among females was strongly associated with history of pregnancy, selling sex, a history of marijuana use, perceived risk of STD, having had two or more sex partners, and living away from family (Table 4).

Among males, factors significantly associated with a history of sexual coercion in the multivariate analysis were homosexual or bisexual self-identification, parents living together, and a history of ulcerative STD (Table 5).

DISCUSSION

This study provides the first systematic estimate of sexual coercion in Thailand. A history of sexual coercion was reported by 21% of fe-

Table 4
Multivariate analysis of factors associated with sexual coercion¹ among female respondents (n =832).

Risk factors	AOR	95% CI
Ever been pregnant	4.4	(2.6-7.2)
Ever sold sex	3.8	(1.5-9.8)
Ever smoked marijuana	3.3	(1.4-7.6)
Perceived risk of STD	3.1	(1.3-7.2)
≥ 2 sex partners (casual and steady) during lifetime	2.3	(1.6-3.4)
Self-reported history of ulcerative STD	1.8	(1.0-3.1)
Homo/bisexual identification	1.8	(1.0-3.0)
Live in dormitory or rented room with friends or on their own	1.7	(1.1-2.5)
Parents separated	1.6	(1.0-2.4)

¹Backward stepwise logistic regression; variables included in the model are: age, having ever sold sex, numbers of sexual partner during lifetime, current condom use, homosexual self-identification, history of pregnancy, self-report history of STD, having ever taken marijuana, having ever taken methamphetamine, having ever taken methamphetamine to lose weight, living situation, having a family confidant, separation of parents, perceived risk of HIV, perceived risk of HIV, and depressive symptoms.

AOR = adjusted odds ratio.

CI = confidence interval.

Table 5

Multivariate analysis of factors associated with sexual coercion¹ among male respondents (n=893).

Risk Factors	AOR	95% CI
Homosexual/ bisexual	6.8	(3.6-13.0)
Parents together	4.0	(1.4-11.0)
Self-reported history of ulcerative STD	2.8	(1.4-5.3)
Ever use methamphetamine to lose weight	2.1	(1.0-4.5)
≥ 2 sex partners (casual and steady) during lifetime	1.9	(1.0-3.6)

¹Backward stepwise logistic regression; variables included in the model are: age, homosexual self-identification, having ever sold sex, numbers of sexual partner during lifetime, current condom use, self-report history of STD, having ever taken methamphetamine to lose weight, having a family confidant, separation of parents, and perceived risk of HIV and STD.

AOR = adjusted odds ratio.

CI = confidence interval.

males and 6.5% of males. Among the sexually active females, 36% said they had been sexually coerced. The sexual coercion reported in this study commonly involved sexual intercourse, and condoms were rarely used during such occasions, particularly among females. Perpetrators generally were male and persons known to the study participants, although some gender differences were present. The factors associated with sexual coercion also varied by gender. For females, sexual coercion was most strongly associated with history of pregnancy and having sold sex, and for males was bisexual or homosexual orientation. For females, marijuana use, perceived risk of STD, and having had two or more lifetime sex partners were also strongly associated with having been coerced.

The prevalence of sexual coercion in this study falls within the range of estimates obtained in other countries. In studies among adolescents in Western countries, between 6% and 62% of females and 3% to 16% of males have reported being coerced (Gibbons, 1996). In a review of North American studies of sexual abuse among boys, prevalence varied from 4% to 76% (Holmes and Slap, 1998). The wide range of prevalences partly reflects differences in definitions of child sexual coercion and methodological differences. Stigma and local norms regarding the disclosure of sexual behavior also may influence findings.

The findings here suggest associations between sexual coercion and STDs similar to those observed in the US (Wingood and DiClemente, 1997; Siegel *et al*, 1995) and Africa (Meursing *et al*, 1995). The cross-sectional nature of the data makes it difficult here, and in other studies, to ascertain causal linkages between sexual coercion and STDs, HIV risk, or other correlates of sexual coercion. Other studies of sexual abuse have shown significant relationships between childhood/adolescent sexual abuse and subsequent HIV risk-taking behaviors among those who were coerced (Zierler *et al*, 1991; Bartholow *et al*, 1994; Cunningham *et al*, 1994; Carballo-Diequez and Dolezal, 1995; Lyon *et al*, 1995; Holmes, 1997; Lenderking *et al*, 1997; Wingood and DiClemente, 1997; Holmes and Slap, 1998; Miller and Paone, 1998; Bensley *et al*, 2000; Cohen *et al*, 2000). The risk-taking behaviors assessed in these studies included engaging in unprotected sex (including receptive anal sex), initiating sex at an early age, engaging in prostitution, having sex with unfamiliar partners, having multiple sex partners, using condoms infrequently, being less assertive about birth control or unwanted sex, and using drugs or alcohol. Somewhat different from these studies was our univariate association between current condom use and sexual coercion among females, although this did not remain significant in the multivariate model. Because the coerced

females were more likely to report selling sex and having had multiple partners, it is likely that condom use may overlap with these factors.

We found that male adolescents who had been abused by other males were seven times more likely than their non-abused peers to self-identify as homosexual. A similar relationship between homosexual orientation and sexual coercion has been found in other studies (Holmes and Slap, 1998). Because of the cross-sectional nature of the study, it is difficult to determine whether an openly homosexual orientation or stereotypical homosexual behavior (*eg*, behavior that does not fit norms of masculinity) may have been associated with these coercive acts. However, both homosexuality and behavior that violates norms of "fearless" masculinity are likely to be viewed as deviant and inappropriate in Thailand. Despite evidence of more open discussion and tolerance of homosexuality in Thailand, there is also evidence that anti-homosexual attitudes and behavior are becoming more overt (Jackson, 1997).

Consistent with research conducted outside of Thailand (Gibbons, 1996; Holmes and Slap, 1998) was our finding that most perpetrators of sexual coercion had been male. Data are suggestive that sexual coercion in our study was related to participants' social vulnerability, *eg* selling sex, substance use, having multiple partners and living away from family for females, and homo or bisexual self-identification in males. For females, their vulnerability may increase because ascribed gender roles expect women to display submissive characteristics which include not initiating, negotiating, or discussing sex (Ford and Kittisuksathit, 1994; 1996; Cash, 1995; Havanon, 1996; Knodel *et al*, 1996). These norms, coupled with the general view that Thai men have a greater drive for sex than Thai women (Knodel *et al*, 1996) and that Thai women themselves should act responsibly in the face of those drives could create an environment where coercive situations easily occur, particularly in close relationships. The differences in gender roles and assumptions about sexuality were formerly buffeted by the use of sex workers by males. Yet, the shift toward premarital

sex in non-commercial relationships has not altered the assumptions about female sexuality or the lack of power that young women are expected to exert in sexual relationships. In addition, there is a trend, especially among young women, toward seeking friendship, as well as companionship from intimate relationships (Im-Em, 1999). This creates an ambiguous area where complying with sexual advances could be seen as a necessity in obtaining the friendship aspects of an intimate relationship.

Other factors associated with sexual coercion were participants' family situation and living arrangements. Living away from family may place female adolescents in situations that could lead to sexual coercion, by taking them away from the protection afforded by the family home and village (Ford and Kittisuksathit, 1994; 1996). Other studies have suggested that when young Thai women leave their home and village for work or school in urban areas, they are more responsive to peer norms and partner demands, which lead to increased sexual activity, including behaviors that increase their risk of HIV exposure (Ford and Kittisuksathit, 1994; 1996; Cash, 1995).

Implications for future studies and intervention

While the cross-sectional nature of the study limits the inferences that can be drawn about the consequences of sexual coercion, or its predisposing factors, the findings do suggest areas for future study with longitudinal research designs, as well as factors that deserve further exploration with in-depth qualitative techniques. Situational factors such as living situation, circumstances of coercion, need further consideration along with factors which may be antecedents or consequences of coercion such as unprotected sex with high risk partners, STDs, unwanted pregnancy, and mental health factors. Consideration also needs to be given to factors such as sexual orientation and life experiences, such as selling sex, which may be particularly associated with coercion. In considering the findings here, it also is important to recognize the limitations of the study population for estimating sexual coercion, and its concomitants in

the Thai population. While vocational school students in provincial Thailand are only one population, 33% of Thais age 15-21 are attending upper secondary schools and schools of higher education, including vocational schools (Anonymous, 1997). Hence, this group represents a large and important subset of the population. Further, these young people are particularly vulnerable to the social changes that are occurring in Thailand, as the Kingdom shifts away from a predominantly rural society to one that is more urbanized, and less bounded to family (Klausner, 1997), as well as becoming characterized by technical and service occupations, rather than unskilled agricultural work. On the other hand, there may be other populations in Thailand where work and living situations create particular vulnerability for sexual coercion such as migratory workers, sex workers, and persons living in situations where family stability is compromised.

The prevalence of sexual coercion among the vocational students in this study and the seriousness of the factors associated with coercion suggest that a variety of helping professionals in Thailand need to be more aware of the frequency of sexual coercion, its associated circumstances, and its potential consequences. The higher reported frequency of sexual coercion among females suggests that particular attention needs to be given to girls and young women. Significantly, over one-third of the sexually active young women in this sample reported that they had experienced sexual coercion and partners were the most frequent perpetrators. This suggests the need to better address how a changing culture can address this kind of situation. While norms make open discussion of sexuality difficult for women in Thailand (Ford and Kittisuksathit, 1994; 1996; Cash, 1995; Havanon, 1996), there is some evidence that sexual issues can be openly discussed among young women, and even between young men and women (with professional facilitation) if those involved are already acquainted (Cash *et al.*, 1997). Other culturally sensitive approaches to addressing the changing sexual more in Thailand may be useful in addressing sexual coercion and other aspects of sexual health. Unfor-

tunately, the changing social norms for sexual behavior among adolescents and young Thai adults has not been met with changes in the professional communities which provide education, health, and social services in Thailand and helping professionals, particularly women, tend to feel uncomfortable with sexual topics (Beyrer, 1998). Hence, it would appear that the professional community needs to better prepare to deal with sexual health, as well as identify sexual coercion, the needs of the coerced and develop appropriate services for them.

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REFERENCES

- Anonymous. Educational Management Information System Center. Bangkok: Ministry of Education, 1997.
- Bartholow B, Doll L, Joy D, Douglas, *et al.* Emotional, behavioral, and HIV risks associated with sexual abuse among adult homosexual and bisexual men. *Child Abuse Negl* 1994; 18: 747-61.
- Bensley LS, van Eenwyk J, Simmons, KW. Self-reported childhood sexual abuse and physical abuse and adult HIV-risk behaviors and heavy drinking. *Am J Prev Med* 2000; 18: 151-8.
- Beyrer C. War in the blood. London and New York: Zed Books, 1998.
- Carballo-Diequez A, Dolezal C. Association between history of childhood sexual abuse and adult HIV-risk sexual behavior in Puerto Rican men who have sex with men. *Child Abuse Negl* 1995; 19: 595-605.
- Cash K. Experimental educational interventions for AIDS prevention among northern Thai single female migratory workers. In: Women and AIDS Program Research Report. Washington, DC: International Center for Research on Women,

- 1995; 9.
- Cash K, Sanguansermisri J, Busayawong W, Chuamanochan P. AIDS prevention through peer education for northern Thai single migratory factory workers. In: Women and AIDS Program Research Report in Brief. Washington, DC: International Center for Research on Women, 1997.
- Celentano DD, Nelson KE, Beyrer C, *et al.* Decreasing incidence of HIV and sexually transmitted diseases in young Thai men: evidence for the success of the HIV/AIDS control and prevention program. *AIDS* 1998; 12: F29-F36.
- Cohen M, Deamant C, Barkan S, *et al.* Domestic violence and childhood sexual abuse in HIV-infected women at risk for HIV. *Am J Public Health* 2000; 90: 560-5.
- Cunningham RM, Stiffman A, Dore P, Earl F. The association of physical and sexual abuse with HIV risk behaviors in adolescence and young adulthood: implications for public health. *Child Abuse Negl* 1994; 18: 233-45.
- Des Jarlais DC, Paone D, Milliken J, *et al.* Audio-computer interviewing to measure risk behavior for HIV among injecting drug users: a quasi randomised trial. *Lancet* 1999; 353: 1657-61.
- Ford NJ, Kittisuksathit S. Destinations unknown: the gender construction and changing nature of the sexual expressions of Thai youth. *AIDS Care* 1994; 6: 517-31.
- Ford NJ, Kittisuksathit S. Youth sexuality: the sexual awareness, lifestyles and related health service needs of young, single factory workers in Thailand. Salaya, Nakorn Pathom, Thailand: Institute for Population and Social Research, Mahidol University, 1996: 204.
- Gibbons J. Services for adults who have experienced child sexual assault: improving agency response. *Soc Sci Med* 1996; 43: 1755-63.
- Havanon N. Talking to men and women about their sexual relationships: insights from a Thai study. In: Zeidenstein S, Moore K, eds. Learning about sexuality: a practical beginning. New York: International Women's Health Coalition and Population Council, 1996: 110-8.
- Havanon N, Bennett A, Knodel J. Sexual networking in provincial Thailand. *Stud Fam Plann* 1993; 24: 1-17.
- Holmes W. Association between a history of childhood sexual abuse and subsequent, adolescent psychoactive substance use disorder in a sample of HIV seropositive men. *J Adolesc Health* 1997; 20: 414-9.
- Holmes W, Slap G. Sexual abuse of boys: definitions, prevalence, correlates, sequelae, and management. *JAMA* 1998; 280: 1855-62.
- Im-Em W. Changing partner relations in the era of AIDS in Upper-North Thailand. In: Caldwell JC, Caldwell P, Anarfi J, *et al.* Resistances to behavioural change to reduce HIV/AIDS infection. Canberra: Health Transition Center, National Center for Epidemiology and Population Health, Australian National University, 1999: 157-70.
- Jackson PA. Kathoey <Gay> <Man>: the historical emergence of gay male identity in Thailand. In: Manderson LJM, ed. Desire, economics of pleasure. Chicago, London: University of Chicago Press, 1997: 166-90.
- Jenkins RA, Mason CJ, Torugsa K, *et al.* Dynamics of HIV risk behavior among young Thai men. *AIDS Behavior* 1999; 3: 335-46.
- Johnsen L, Harlow L. Childhood sexual abuse linked with adult substance use, victimization, and AIDS-risk. *AIDS Educ Prev* 1996; 8: 44-57.
- Kilmarx PH, Supawitkul S, Wankrairoj M, *et al.* Explosive spread and effective control of human immunodeficiency virus in northernmost Thailand: the epidemic in Chiang Rai province, 1988-99. *AIDS* 2000; 14: 2731-40.
- Kitsiripornchai S, Markowitz LE, Ungchusak K, *et al.* Sexual behavior of young men in Thailand: regional differences and evidence of behavior change. *J Acquir Immune Defic Syndr Hum Retrovir* 1998; 18: 282-8.
- Klausner WJ. Thai culture in transition. Bangkok: The Siam Society, 1997.
- Klein H, Young P, Wild J. Sexual abuse during childhood and adolescence as predictors of HIV-related behaviors in adulthood [Abstract# PC0180]. Yokohama: X International Conference on AIDS, August 7-12, 1994 .
- Knodel J, van Landingham M, Saengtienchai C, Pramualratana A. Thai view of sexuality and sexual behaviour. *Health Transit Rev* 1996; 6: 179-201.
- Lenderking W, Wold C, Mayer KH, Goldstein R, Losina E, Seage GR. Childhood sexual abuse among homosexual men: prevalence and association with unsafe sex. *J Gen Intern Med* 1997; 12: 250-3.
- Lyon M, Richmond D, D'Angelo L. Is sexual abuse in childhood or adolescence a predisposing factor for HIV infection during adolescence? *Pediatr AIDS*

- HIV Infect* 1995; 6: 271-5.
- Maman S, Campbell J, Sweat MD, Gielen AC. The intersections of HIV and violence: directions for future research and interventions. *Soc Sci Med* 2000; 50: 459-78.
- Metzger DS, Koblin B, Turner C, *et al.* Randomized controlled trial of audio computer-assisted self-interviewing: utility and acceptability in longitudinal studies. *Am J Epidemiol* 2000; 152: 99-106.
- Meursing K, Vos T, Coutinho O, *et al.* Child sexual abuse in Matabeleland, Zimbabwe. *Soc Sci Med* 1995; 41: 1693-704.
- Miller M, Paone D. Social network characteristics as mediators in the relationship between sexual abuse and HIV risk. *Soc Sci Med* 1998; 47: 765-77.
- Podhisita C, Pattaravanich U. Youth in contemporary Thailand: results from the family and youth survey. Salaya, Nakorn Phathom, Thailand: Institute for Population and Social Research, Mahidol University, 1995: 197.
- Rind B, Tromovitch P, Bauserman R. A Meta-analytic examination of assumed properties of child sexual abuse using college samples. *Psychol Bull* 1998; 124: 22-53.
- Siegel RM, Schubert CJ, Myers P, Shappiro RA. The prevalence of sexually transmitted diseases in children and adolescents evaluated for sexual abuse in Cincinnati: rationale for limited STD testing in prepubertal girls. *Pediatrics* 1995; 96: 1090-4.
- Turner CF, Ku L, Rogers SM, Lindberg LD, Pleck JH, Sonenstein FL. Adolescent sexual behavior, drug use, and violence: increased reporting with computer survey technology. *Science* 1998; 28: 867-73.
- UNAIDS. Statement for the world conference of ministers responsible for youth. Lisbon, Portugal, 8-12 August, 1998.
- Van Griensven GJP, Supawitkul S, Kilmarx PH, *et al.* Rapid assessment of sexual behavior, drug use, HIV and sexually transmitted diseases in northern Thai youth, using audio-computer assisted self-interviewing and non-invasive specimen collection. *Pediatrics* 2001; 108: e13.
- Van Griensven GJP, Surasiengsunk S, Panza A. The use of mortality statistics as a proxy indicator for the impact of the AIDS epidemic on the Thai population. Bangkok: Institute of Population Studies, Chulalongkorn University, 1998; 267/48.
- Van Lingham M, Knodel J, Saengtienchai C, Pramualratana A. In the company of friends: Peer influence on Thai male extramarital sex. *Soc Sci Med* 1998; 47: 1993-2011.
- Wingood G, DiClemente R. Child sexual abuse, HIV sexual risk, and gender relations of African-American women. *Am J Prev Med* 1997; 13: 380-4.
- Xenos P, Pitaktepsombati P, Sittitrai W. Partner patterns in the sexual behavior of unmarried, rural Thai men. *Asian Pacific Popul Forum* 1993; 6: 104-17.
- Zierler S, Feingold L, Laufer D, Velentgas P, Kantrowitz-Gordon I, Mayer K. Adult survivors of childhood sexual abuse and subsequent risk of HIV infection. *Am J Public Health* 1991; 81: 572-5.