Peer victimisation and depression among gender conforming and non-conforming Thai adolescents

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Abstract

Like most low- and middle-income countries, Thailand is facing an increasing burden of depressive disorders among adolescents, but research and services for them are largely neglected. This study explored the association between types of peer victimisation, gender non-conformity, health risk behaviours, and depressive symptoms among Thai students aged 13–18 years. Overall, prevalence of depressive symptoms was 14.7% (95% CI: 12.6–15.6), 12.2% (95% CI: 9.5–13.9) among male students and 16.5% (95% CI: 13.8–18.0) among female students. Among both sexes, social and sexual victimisation in the past month were strongly associated with depressive symptoms in the past week. Gender non-conforming female adolescents, as well as male and female adolescents who had experienced sexual and social victimisation, had a high burden of depressive symptoms. Mental health professionals and educators working with young people in Thailand should consider assessment for clinically significant depressive disorders.

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Introduction

More than 90% of the world's adolescents reside in low and middle-income countries where mental health research and services for them are disproportionately scarce (Kieling et al. 2011; Saraceno et al. 2007). Thailand is among these countries with an increasing burdens of depressive disorders (Bundhamcharoen et al. 2011; Ferrari et al. 2013; Ruangkanchanasetr et al. 2005; Thailand Ministry of Public Health). Adolescents who experience depressive symptoms are at elevated risk of major depression, suicide, substance use and a wide range of other mental, sexual and reproductive health issues across their lifespan (Bucchianeri et al. 2014; Copeland et al. 2013; Ferrari et al. 2013; Roberts et al. 2013). Studies have estimated a high prevalence of moderate-to-high level of depressive symptoms (17% to 22%) among Thai adolescents (Pengpid and Peltzer 2013; Ruangkanchanasetr et al. 2005; Trangkasombat 2012). However, timely detection and effective intervention for adolescent depressive disorders remain suboptimal, particularly in low and middle-income countries (Leaf et al. 1996; Saraceno et al. 2007). Identifying culturally relevant correlates of adolescent depression can benefit mental health screening and intervention development, but this line of research is particularly scarce in Thailand (Bass, Bolton and Murray 2007; Ferrari et al. 2013; Saraceno et al. 2007).

The emergence of depression is closely related to the developmental trajectory of exposure to environmental and psychosocial factors (Gilman 2002; Kieling et al. 2011) including experiences of peer victimisation, gender role conformity and health risk behaviours such as substance use (Briere et al. 2013; Copeland et al. 2013; Espelage et al. 2012; Priess, Lindberg, and Hyde 2009; Saluja et al. 2004; Sourander et al. 2007; Thapar et al. 2012; van Geel et al. 2014). Adolescents who experience frequent victimisation are three to five times more likely to develop depression in early adulthood (Bogart et al. 2014; Copeland et al. 2013; Pengpid and Peltzer 2013; Sourander et al. 2007; van Geel et al. 2014), but the impact of victimisation on depression depends on its frequency and duration (Bogart et al. 2014; Bucchianeri et al. 2014; Espelage et al. 2012; Gruber and Fineran 2008), which have compounding effects (Bogart et al. 2014; Saluja et al. 2004). In addition, Espelage et al. (2012) found that bullies who perpetrated traditional forms (physical and verbal) of bullying were more likely to perpetrate sexual victimisation (i.e. forced sex) among both boys and girls. A similar pattern can be expected among victims with young people who are targeted by bullies are at increased risk for sexual victimisation (Bucchianeri et al. 2014). In a prior report, our team found that peer victimisation experienced by Thai adolescents took physical, verbal, social and sexual forms (Mahidol University, Plan International Thailand, and UNESCO Bangkok 2014). However, the association between these different forms of victimisation and mental health outcomes among Thai adolescents are still unknown.

Sex difference in depression appears at around ages 13–15 years (Kieling et al. 2011; Leaf et al. 1996; Patel et al. 2007; Saraceno et al. 2007). The prevalence of adolescent depression is higher among adolescent girls than boys in the US population (Saluja et al. 2004). However, research on sex differences in adolescent depression has shown contradictory results in Thailand, and hence merits further investigation (Kongsuk et al. 2008; Trangkasombat 2012). Apart from biological sex, gender role conformity is posited to have a substantial contribution to adolescent depression (Priess, Lindberg, and Hyde 2009; Roberts et al.

2013). In addition to experiences of victimisation, gender and sexual discourses in Thai cultural contexts (Jackson 2011) may uniquely play a role in adolescent depression. To date, it is unknown how these social discourses contribute to the patterning of Thai adolescents' mental health. In addition, substance use disorders and depressive symptoms share several common causes such as early childhood maltreatment (Copeland et al. 2013; Gilman 2002; Hayatbakhsh et al. 2013). Both alcohol and tobacco use during adolescence are well-known risk factors for depression (Beal et al. 2014; Saluja et al. 2004; Sourander et al. 2007; Thapar et al. 2012). Given the high prevalence of cigarette smoking and alcohol use among Thai adolescents and young adults, further examination of the relationship between these concurrent risk behaviours and adolescent depression is warranted (Ruangkanchanasetr et al. 2005).

Apart from inconsistent findings on sex differences of adolescent depression in Thailand, few studies have explored the relationship between peer victimisation and adolescent depression. Moreover, existing studies primarily recruited adolescents from Bangkok, the capital city, and none have used a qualitatively informed questionnaire to capture varying forms of victimisation experience among adolescents (Pengpid and Peltzer 2013; Ruangkanchanasetr et al. 2005; Sopitarchasak et al. 2017; Thailand Ministry of Public Health; Trangkasombat 2012).

Informed by formative research, we developed a culturally relevant survey to assess Thai adolescents' victimisation experience and psychosocial correlates. In this article, we explore the association between types of peer victimisation, gender non-conformity, health risk behaviours, and depressive symptoms among Thai students aged 13–18 years. We hypothesised that gender non-conforming adolescents had higher odds of depressive symptoms than those who were gender conforming, and that sexual victimisation is strongly associated with a clinically significant level of depressive symptoms.

Methods

Participants

Data came from a national cross-sectional study conducted among students from 15 secondary schools in Thailand between August and September 2013. The study used a multistage cluster design to provide a nationally representative sample of adolescents attending secondary school in Thailand, based on school districts in each of the 5 regions (Bangkok, Central, Northeastern, Northern and Southern) and schools within each district. At each selected school, the research team randomly selected two classes in each grade level based on their student ID number. Details of the sampling procedure are described elsewhere (Mahidol University et al. 2014). The Thai education system divides secondary school grades into lower secondary (grade 7–9, 13–15 years old) and upper secondary (grade 10–12, 16–18 years old) levels. About 40% of students opt out to attend vocational education after completing lower secondary levels (Plubplueng and Patmasiriwat 2019).

The survey response rate was 90%; non-respondents were primarily students who were absent on the data collection day. Survey completion rate was 100%. The high response and completion rates are not uncommon in studies involving student participants in Thailand

(Pengpid and Peltzer 2013). With the school administrators' assistance, researchers obtained informed written consent from all participants 18 years and older and informed written assent from all participants 13 to 17 years. For students under 18 years, additional written permission was obtained from parents or proxies. We informed students and the school administrators that their participation was completely voluntary and anonymous, and we provided each participant with 50 baht (1.65 USD) recompense for their participation.

Measures

Students completed computerised, self-administered surveys, lasting 15–30 minutes each. The questionnaires were informed by formative research that included focus group discussions and in-depth interviews involving students, teachers and school administrators. In addition, researchers conducted systematic observation at various schools throughout the five regions to assess school environments and social and cultural contexts. From this formative research, we developed questionnaires, which were then extensively pilot tested to make sure that the questions were socially and culturally appropriate to Thai youth, easy to understand, and that the length of time to complete the survey was not too long. In addition, a technical review board comprising of LGBT activists of various identities and representation from UNESCO reviewed the survey tool, including all survey measures.

Gender role conformity[1]—The computerised questionnaire asked students who identified themselves as male to indicate their perception about how much "manliness" (*khwam pen phu chai* or masculinity) they had compared to other male students. Options included less manly, equally manly, and more manly. We created a dummy variable and coded those who rated themselves as equally or more manly as gender conforming and those who rated themselves as less manly as gender non-conforming. Likewise, with female students, the questionnaire asked them to self-rate themselves in terms of how much "womanliness" (*khwam pen phu ying* or femininity) they had compared to other female students; their responses were coded in a similar manner.

Peer victimisation—Based on qualitative research published elsewhere, we categorised Thai adolescents' accounts of peer victimisation into physical, verbal, social and sexual types (Mahidol University et al. 2014). This section of the survey included 4 questions on physical forms of victimisation, 3 questions on verbal forms of victimisation, 3 questions on social domains and 4 questions on sexual victimisation. These questions asked students to rate the frequency with which they had experienced these incidents in the past month as "not once," "1–3 times per month," "once a week," and "more than once a week." We further categorised these frequencies into "not once" "1–3 times per month," or "at least once a week" and a binary variable to indicate whether or not the participant was victimised in the specific form for subsequent analyses. Physical victimisation includes other students slapping, slapping the head, hitting, kicking or pushing, pinching, pulling the hair, grabbing the body, throwing things, tripping or shoving. Social victimisation includes being

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[1]In the survey, we asked students about sexual attraction, gender and sexual identity, and gender role non-conformity. For this article, we used the ladder measure. We asked students whether they are more or less masculine compared to other boys at school (for students who were assigned "male" at birth), and whether they are more or less feminine than other girls at school (for students who were assigned "female" at birth).

gossiped about, having secrets exposed, or being isolated from peer social groups. Sexual victimisation includes having skirts, shirts or pants taken off or lifted up, physical attacks on the mouths, genitals, breasts or buttocks, and forced sexual contacts.

Current health risk behaviours—Students were asked whether they currently smoked cigarettes and drank alcohol. Following a positive response, they were prompted to rate their frequency of use as "1–3 days per week" and "more than 3 days per week," respectively.

Depressive symptoms—Depressive symptoms were measured using the Center for Epidemiologic Studies-Depression (CES-D) questionnaire, Thai version. The CES-D is a 20-item scale to assess participants' depressive symptoms in the past week with a sum score that ranges from 0–60 points. A higher score reflects a higher level of depressive symptoms. Traditionally, a total score of 16 or higher has been used to identify clinically significant depressive symptoms. However, we used a sum score of 22 or higher to indicate clinically significant depressive symptoms because it correlated better with the optimal diagnoses of clinically significant depression (major depressive disorder and dysthymia) based on previous validation studies conducted among Thai adolescents (Trangkasombat, Larpboonsarp and Havanond 1997; Trangkasombat 2012). Therefore, in the present study, we defined participants who had a CES-D score of 22 or higher as having a clinically significant level of depressive symptoms.

Statistical analyses

In initial analyses, we examined associations between socio-demographic variables, current health risk behaviours and peer-victimisation with the odds of having a significant level of depressive symptoms. We estimated all proportions using multi-stage sampling weights and corrected for clustering by schools using generalised estimating equations (GEE) in both bivariate and multivariable analyses (Liang and Zeger 1993). We stratified these analyses by sex due to a sex difference in the risk of depression that begins by ages 13–15 (Saluja et al. 2004; Thapar et al. 2012). Young people can experience multiple types of victimisation, i.e. having experienced physical victimisation may be indicative of social and sexual victimisation. In later analyses, we simultaneously adjusted for other types of peer victimisation exposure to investigate if any exposure to a specific type of victimisation, but not to the other types, was independently associated with the odds of depressive symptoms while also adjusting for health risk behaviours and socio-demographic variables. Since no variables had missing values from more than 10% of participants, list-wise deletion was used in all statistical procedures. We conducted all analyses using SAS 9.3, North Carolina, USA, with a 2-tailed critical value of 0.05 for hypothesis testing.

Results

In our sample, students were equally distributed across each of the 6 secondary school grade levels (16.5%) corresponding to an age range of 13 to 20 years (Mean: 15.4, SD: 1.7), both lower and upper secondary school graders constituted 50% of the overall sample (Table 1). A majority of students reported their parents having secondary lower vocational education (42.3%) and spending between 31 to 100 Thai baht (1 to 3 USD) on their daily

expenses (75.1%). About seventeen percent of students reported part-time employment and forty percent reported last term's grade point average (GPA) above 3.0. Participants who were assigned a male sex at birth constituted 41% of the entire adolescent sample; 2.8% of these students reported being less masculine than other boys while 6.4% of females reported being less feminine than other girls. Approximately 6% were current tobacco smokers and 20.7% were currently consuming alcohol. Students reported a high prevalence of different types of peer victimisation in the last month: 53.6% had experienced any physical victimisation, 52.1% had experienced any verbal victimisation, 56.9% had experienced any social victimisation, and 30% had experienced any sexual victimisation.

The prevalence of depression was 14.7% (95% CI: 12.6–15.6) overall, 12.2% (95% CI: 9.5–13.9) among male adolescents, and 16.5% (95% CI: 13.8–18.0) among female adolescents. Female adolescents had higher odds of clinically significant depressive symptoms compared to males (OR: 1.50, 95% CI: 1.17–1.93). Table 2 presents the bivariate associations between sociodemographic factors, gender role conformity, experiences of victimisation, and substance use behaviours with the presence of clinically significant depressive symptoms separately for young women and young men. Among male students, a Grade Point Average (GPA) below 3.0 (compared to a higher GPA) was associated with higher odds of depression. In addition, verbal, social and sexual types of peer victimisation in the past month were dose-dependently associated with higher odds of depression except for physical victimisation. Among female students, daily expenses higher than 100 baht (compared to 0–30 baht), part-time employment, a GPA below 3.0 (compared to a higher GPA), being less feminine than other girls and current consumption of cigarette 1–3 days per week were associated with higher odds of depression. Alcohol consumption and all four types of peer victimisation in the past month were dose-dependently associated with higher odds of depression. Significant associations between each type of victimisation and depression remained after adjusting for socio-demographic, gender conformity and risk behaviour variables (Table 3).

Table 4 shows the adjusted odds ratios comparing odds of depression between covariate levels by sex. In the model relating to young men, students with a GPA below 3.0 had higher odds of depressive symptoms. In addition, male students who were verbally, socially or sexually victimised four times or more in the past month had higher odds of depression, compared to those who experienced none. Among female students, those who reported daily expenses above 100 baht compared to those with 0 to 30 baht, and those with a GPA lower than 3.0, had higher odds of depression. Female students who identified as less feminine than other girls had higher odds of depression, after adjusting for other baseline student characteristics and risk behaviours. Young women who were verbally or socially victimised four times or more in the past month, compared to those who had none, had higher odds of depression. Although female students who currently consumed cigarettes and alcohol had a high prevalence of depression (35.3% and 28.4%, respectively), these variables were not associated with depression in the adjusted model.

Discussion

In this study, we examined the prevalence of depression and their age-relevant correlates among Thai adolescents attending secondary school. Congruent with previous studies among the adult Thai population and the majority of studies on adolescent populations elsewhere, the prevalence of depression was higher among young women than young men (Ferrari et al. 2013; Saluja et al. 2004; Thapar et al. 2012). This finding contrasts with that of a previous study among Thai adolescents that used the same measure and cut-off point for depression, which found that a higher prevalence of depression among boys than girls (Trangkasombat 2012). This difference could be attributable to differences in the sampling methodology employed.

Our study is the first to document peer victimisation experiences using qualitatively informed measures and to examine their relationships with depression among school-going young people in Thailand. Our results show that most types of peer victimisation were dose-dependently associated with depression. This finding is consistent with cross-sectional and cohort studies of victimised adolescents elsewhere (Bogart et al. 2014; Copeland et al. 2013; Kieling et al. 2011; Saluja et al. 2004; Sourander et al. 2007; Thapar et al. 2012; van Geel et al. 2014). Higher frequencies of physical victimisation, however, were not associated with an increasing level of depression. In addition, we found that, among both young women and young men, social and sexual victimisation in the past month was most strongly associated with odds of depression in the past week after adjusting for other types of victimisation, risk behaviours and demographic factors. This result extends previous findings and highlights the important contribution of social and sexual victimisation to mental health burdens (Bucchianeri et al. 2014; Gruber and Fineran 2008).

Peer victimisation, including sexual harassment, spreading rumours or gossip about the victim and social exclusion of victims, are seldom isolated incidents: both the frequency and form of victimisation matter (Bucchianeri et al. 2014; Copeland et al. 2013; Espelage et al. 2012; Gruber and Fineran 2008; Saluja et al. 2004). The cross-sectional design of our study provides limited insights into the dynamics of victimisation types over time, but our results highlight the important contribution of social and sexual types of victimisation to the mental health burden of adolescents in Thailand.

A prior publication revealed that secondary school teachers in Thailand also have a poor understanding of peer sexual victimisation (Mahidol University et al. 2014). For example, one teacher said during an in-depth interview that sexual victimisation involved girls fighting over a boy or boys fighting over a girl (Mahidol University et al. 2014). Further research is needed to address this gap in policy and awareness among secondary schools in Thailand. Thirty percent of participants in our sample reported sexual victimisation in the past month, and among those sexually victimised, 30% had depression.

In our study, gender non-conforming girls had the highest burden of depression, followed by gender non-conforming boys, gender-conforming girls and gender-conforming boys. Researchers have argued that gender and sexual non-conforming men, relative to women, have gained wider recognition in the Thai entertainment arena, media and public spaces

(Jackson 2011; Sinnott 2004). Previous literature on gender non-conformity and mental health in Thailand (Ojanen 2009; Jackson 2011; Sinnott 2004) do not indicate whether the lower visibility of gender non-conforming girls in Thailand has a negative impact on their health. Future longitudinal studies should investigate the mediating roles of sexual and gender-based discrimination and related stressors on mental health outcome trajectories, experienced by gender non-conforming Thai adolescents.

Limitations

Findings from this study should be interpreted in light of several limitations. First, we used a school-based sample; hence, out-of-school youth were not represented. Street-recruited adolescents may have higher prevalence of depression (Ruangkanchanasetr et al. 2005). Although the Thai government mandates secondary school education, it is also possible that young people with poorer mental health outcomes (including institutionalised adolescents) were absent on the days of the assessment or had dropped out of school entirely. Second, cross-sectional studies like the present study cannot establish temporality, i.e. it is possible that depressed adolescents have characteristics that predispose them to victimisation, rather than depression following victimisation (Kaltiala-Heino, Fröjd and Marttunen 2010). Depressed adolescents could also either fail to report their victimisation experience or exaggerate the degree of such experiences; longitudinal studies are needed to investigate the temporal relationship between associated factors and subsequent depressive symptoms. Third, we did not assess the mental health status of participants' family members or participants' adverse experiences in early childhood; these could be important confounders between victimisation and depressive symptoms. Young men in school may also under-report depressive symptoms attributable to masculine ideologies (Courtenay 2010). Moreover, peer victim-perpetrators (those who are victimised and also victimise others) are known to have worse mental health outcomes than those who are victims only; we did not differentiate them from others in this study (Bogart et al. 2014; Copeland et al. 2013; Sourander et al. 2007).

Conclusion

Despite the above limitations, study findings serve to motivate future longitudinal studies to investigate mental health outcomes among Thai youth in schools and the mediating roles of peer victimisation, particularly among gender non-confirming Thai youth. Currently, there is no adolescent cohort in Thailand focused on mental health trajectories. Establishing such a cohort may address important gaps in knowledge to inform evidence-based mental health interventions for adolescents (Saraceno et al. 2007; Sleigh et al. 2007). Our study has demonstrated that depression is more common among female Thai adolescents than male, and particularly among gender non-conforming girls. Moreover, Thai adolescents who reported recent experiences of social victimisation and sexual victimisation were more likely to experience depression. School teachers and mental health professionals should consider peer victimisation and depression as important psychosocial conditions common among Thai students, particularly gender non-conforming students. In schools, there needs to be a clear and confidential referral process to mental health and social services for students.

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Table 1.

Socio-demographic characteristics of a nationally representative sample of Thaiadolescents (N=2070)

Factor	N	%
Grade		
7th- 9th or lower secondary	1028	*50.0*
10th- 12th or upper secondary	1041	*50.0*
Missing	1	--
Parent's education		
None to primary	638	*31.7*
Secondary to lower vocational	768	*42.3*
Mini-bachelor's to doctorate	463	*30.0*
Missing	201	--
Daily expense		
0–30 Baht	192	*7.1*
31–100 Baht	1539	*75.1*
More than 100 Baht	339	*17.8*
Part-time employment		
Yes	338	*17.3*
No	1732	*82.7*
Last term's GPA		
3.0 or above	818	*39.6*
Below 3.0	1252	*60.4*
Biological sex		
Male	857	*41.4*
Female	1213	*58.6*
Gender role expression		
Male-equal or more manly	788	*38.6*
Male-less manly	58	*2.8*
Female-less womanly	131	*6.4*
Female-equal or more womanly	1082	*52.2*
Current history of cigarette consumption		
More than 4 cigarettes per day	36	*2.1*
1–3 per cigarettes day	81	*4.3*
Not once	1933	*93.7*
Missing	20	--
Current history of alcohol consumption		
5 or more glasses/ cans per day	132	*5.7*
1–4 glasses/ cans per day	305	*15.1*
Not once	1613	*79.3*
Missing	20	--
Physical victimisation, past month		
4 times or more	352	*17.4*

Factor	N	%
1 to 3 times	750	*36.3*
Not once	968	*46.4*
Verbal victimisation, past month		
4 times or more	320	*15.8*
1 to 3 times	733	*36.3*
Not once	1017	*47.9*
Social victimisation, past month		
4 times or more	332	*16.4*
1 to 3 times	849	*40.5*
Not once	889	*43.1*
Sexual victimisation, past month		
4 times or more	179	*9.3*
1 to 3 times	442	*20.7*
Not once	1449	*70.0*
Depressive symptoms (CESD score 22)		
Yes	291	*14.7*
No	1779	*85.3*

Table 2.

Prevalence of depressive symptoms by socio-demographic, gender role, health risk behaviour and peer-victimisation among male and female Thai adolescents

Overall prevalence (95% CI)	Male (N= 857) 12.2% (9.5–13.9)			Female (N=1213) 16.5% (13.8–18.0)		
Factor	%	OR	95% CI	%	OR	95% CI
Grade level						
7th- 9th	11.3	1.14	0.69–1.87	15.2	1.16	0.77–1.74
10th- 12th	13.6	Ref		17.5	Ref	
Parent's education						
None to primary	12.7	Ref		16.1	Ref	
Secondary to lower vocational	11.8	1.05	0.78–1.42	15.5	0.92	0.58–1.46
Associate's or higher	11.5	0.77	0.42–1.34	20.5	1.26	0.79–2.00
Daily expenses						
0–30 Baht	7.7	Ref		10.8	Ref	
31–100 Baht	11.0	1.29	0.48–3.52	15.4	1.43	0.78–2.63
More than 100 Baht	18.4	2.31	0.74–7.20	23.9	2.90	1.46–5.77
Part-time employment						
Yes	16.3	1.26	0.87–1.83	22.4	1.71	1.17–2.50
No	11.1	Ref		15.5	Ref	
Last term's GPA						
3.0 or above	6.2	Ref		13.0	Ref	
Below 3.0	14.5	2.78	1.80–4.31	19.8	1.60	1.19–2.16
Gender role expression						
Less manly/womanly	16.7	1.05	0.46–2.40	26.1	2.10	1.30–3.34
Equal or more manly/womanly	11.9	Ref		15.3	Ref	
Frequency of cigarette smoking, current						
More than 3 days per week [*]	19.5	2.09	0.83–5.30	--		
1–3 days per week	12.1	1.54	0.57–4.13	35.3	3.38	1.06–10.77
Not once	11.4	Ref		16.2	Ref	
Frequency of alcohol drinking, current						
Weekly	22.4	1.74	0.92–3.27	32.3		
Occasionally	19.9	2.57	1.40–4.80	28.1	2.44	1.49–4.01
Not once	9.6	Ref		13.7	Ref	
Physically victimised, past month						
4 times or more	11.9	1.77	1.41–3.78	26.0	2.87	1.96–4.20
1 to 3 times	16.0	2.31	1.41–3.78	21.4	2.31	1.66–3.22
Not once	8.0	Ref		10.9	Ref	
Verbally victimised, past month						
4 times or more	19.3	2.78	2.04–3.79	31.2	4.09	2.23–7.52
1 to 3 times	12.9	1.90	1.20–3.03	19.8	2.07	1.41–3.06
Not once	8.8	Ref		10.0	Ref	

Overall prevalence (95% CI)	Male (N= 857) 12.2% (9.5–13.9)			Female (N=1213) 16.5% (13.8–18.0)		
Factor	**%**	**OR**	**95% CI**	**%**	**OR**	**95% CI**
Socially victimised, past month						
4 times or more	21.1	4.46	2.74–7.22	30.1	4.80	1.57–4.12
1 to 3 times	16.5	3.20	1.82–5.63	17.8	2.54	1.57–4.12
Not once	6.4	Ref		8.5	Ref	
Sexually victimised, past month						
4 times or more	25.6	4.18	2.42–7.22	33.1	4.44	2.52–7.82
1 to 3 times per month	17.2	2.24	1.25–4.03	27.2	2.94	2.15–4.03
Not once	9.1	Ref		11.1	Ref	

SE: Standard error, OR: odds ratio, CI: confidence interval, B: Thai baht;

*
Insufficient cell size for estimation

Table 3.

Odds of depressive symptoms by victimisation type and frequencies among male and female Thai adolescents

Type of victimisation in the past month	Male (N=857)		Female (N=1213)	
	AOR	95% CI	AOR	95% CI
Physically victimised [*]				
4 times or more	2.05	1.05–4.00	2.62	1.71–4.01
1 to 3 times	3.11	1.95–4.94	1.98	1.35–2.91
Not once	Ref		Ref	
Verbally victimised [*]				
4 times or more	2.59	1.79–3.75	3.57	1.92–6.62
1 to 3 times	2.24	1.32–3.79	1.95	1.25–3.04
Not once	Ref		Ref	
Socially victimised [*]				
4 times or more	4.24	2.24–8.03	4.21	2.24–7.93
1 to 3 times	4.08	2.23–7.47	2.21	1.31–3.73
Not once	Ref			
Sexually victimised [*]				
4 times or more	3.74	2.21–6.32	3.53	1.74–7.16
1 to 3 times	2.74	1.46–5.12	2.71	1.89–3.89
Not once	Ref		Ref	

AOR: adjusted odds ratio, CI: confidence interval

[*] Each variable was a separate model adjusted for parent's education, part-time employment, school grade level, last term GPA, gender role perception, cigarette and alcohol consumptions, but not other types of victimisation.

Table 4.

Odds of depressive symptoms by socio-demographic, gender role, health risk behaviour and peer-victimisation among male and female Thai adolescents

Factor	Male (N=857)		Female (N=1213)	
	AOR	95% CI	AOR	95% CI
Daily expense 31–100B (vs. 0–30B)	2.09	0.65–6.73	1.31	0.88–1.96
Daily expense above 100B (vs. 0–30B)	1.52	0.52–4.49	2.01	1.29–3.12
Last term GPA below 3.0 (vs. above 3.0)	2.39	1.61–3.54	1.41	1.04–1.91
Less manly/womanly	0.84	0.38–1.82	1.85	1.05–1.91
Cigarette consumption, current	0.84	0.50–1.42	1.65	0.42–6.44
Alcohol consumption, current	1.38	0.72–2.63	1.41	0.77–2.56
Physically victimised (vs. not once), past month				
4 times or more	1.06	0.50–2.25	1.16	0.78–1.74
1 to 3 times	1.77	1.01–3.10	1.24	0.93–1.67
Verbally victimised (vs. not once), past month				
4 times or more	1.63	1.10–2.42	2.18	1.06–4.49
1 to 3 times	1.45	0.81–2.59	1.40	0.86–2.29
Socially victimised (vs. not once), past month				
4 times or more	2.94	1.68–5.15	2.25	1.11–4.56
1 to 3 times	2.81	1.48–5.34	1.50	0.85–2.66
Sexually victimised (vs. not once), past month				
4 times or more	2.59	1.44–4.67	2.17	1.00–4.68
1 to 3 times	1.50	0.83–2.72	2.16	1.49–3.14

AOR: adjusted odds ratio, CI: confidence interval, B: Thai baht, all models adjusted for parent's education, part-time employment and school grade level