Childhood Emotional, Physical, and Sexual Abuse and Associations With Mental Health and Health-Risk Behaviors Among University Students in the Association of Southeast Asian Nations (ASEAN)

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The aim of this study was to retrospectively estimate the prevalence of childhood emotional abuse (CEA), childhood physical abuse (CPA), and childhood contact sexual abuse (CCSA) in relation to adult poor mental health, addictive behavior, and other health-risk behaviors among university students in five ASEAN countries (Indonesia, Malaysia, Myanmar, Thailand, and Vietnam). In a cross-sectional survey, 3,240 undergraduate university students were randomly selected (*M* age = 20.5 years, *SD* = 1.6 years) to respond to a questionnaire including the Abuse section of the World Health Organization (WHO) Version 1 "Adverse Childhood Experiences International Questionnaire" (ACE-IQ) and other measures. The students reported 17.9% CEA, 28.2% CPA, and 22.4% CCSA, with the highest prevalence of CEA in Myanmar (30.9%) and CPA and CCSA in Vietnam (55.8% and 41.6%, respectively). In logistic regression models, adjusting for sociodemographic and social variables, the separate and cumulative effects of three types of child abuse (emotional, physical, and sexual) were found to increase the risks for poor adult mental health, addictive, and other health-risk behaviors.

Keywords: university students, childhood emotional abuse, physical abuse, sexual abuse, mental health, addictive behavior, ASEAN

Child abuse occurs to individuals younger than 18 years of age and may include physical, sexual, and emotional abuse (World Health Organization [WHO], 2016). Globally, about "20% of women and 5–10% of men report being sexually abused as children, while 25–50% of all children report being physically abused" and "many children are subject to emotional abuse and to neglect" (WHO, 2016, p.1). As a consequence of having experienced child abuse, adults are at "increased risk for behavioral, physical and mental health problems such as perpetrating or being a victim of violence, depression, smoking, obesity, high-risk sexual behaviors, unintended pregnancy, alcohol and drug misuse." (WHO, 2016, p.1). Consequences of the morbidity, disability, and mortality caused

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by child abuse and neglect are social disadvantage and economic loss (Fang et al., 2015). When young adults who have experienced multiple types of child abuse are compared to those who have not experienced any form or only a single type of child abuse, the victims of multiple abuse may have significantly poorer mental health and behavioral problems, supporting an additive model of child abuse effects (Arcata, Langhinrichsen-Rohling, Bowers, & O'Brien, 2007; Chaopricha & Jirapramukpitak, 2010; Jirapramukpitak, Prince, & Harpham, 2005; Nguyen, Dunne, & Le, 2010; Tran, Dunne, Vo, & Luu, 2015).

In Asia, several studies of child abuse experiences have been conducted in the past few years. A study of young people in Taipei showed that 1 in every 20 individuals experienced child sexual abuse and that they had a greater chance to report drinking, gambling, and suicidal ideation than others (Zhu et al., 2015). In Japan, Oshima, Fukui, Watari, and Miwa (2015) found that the "severity of dyspeptic symptoms" was more prevalent in study participants with histories of childhood abuse. In China, child abuse experiences have been reported to be related with sadness, suicidality, risk behaviors, and risk of chronic diseases among adolescents and adults (Chen, Dunne, & Han, 2006; Kwok, Yeung, Low, Lo, & Tam, 2015; Lina, Lib, Fana, & Fang, 2011; Nie et al., 2015). Among Vietnamese ASEAN university students, prevalence rates of CPA and CCSA were 35.9% and 15.1%, respectively (Tran et al., 2015). Among Vietnamese adolescents, individuals were classified as having one (25.9%), two (20.7%), three (14.5%), or four (including child neglect) (6.3%) maltreatment types (Nguyen et al., 2010). In a cross-sectional, population-based survey in Bangkok, 38% of young residents (16-25 years) reported experiencing some type of child abuse: 5.8% sexual penetration, 11.7% physical abuse, and 31.8% emotional abuse (Jirapramukpitak et al., 2005). In another population-based survey of young people (16–25 years) in a suburban community in Thailand, the prevalence of child abuse was approximately 30%: 15% physical abuse and 12% sexual abuse

(Chaopricha & Jirapramukpitak, 2010). In a secondary school survey in Malaysia, emotional and physical child abuse were the most common, and 22.1% had experienced more than one type of child abuse (Choo, Dunne, Marret, Fleming, & Wong, 2011). The prevalence of child abuse, including CCSA, may differ between countries in Asia (Chen et al., 2006; Elliott & Urquiza, 2006). For example, the prevalence of CCSA appears to be lower in studies conducted in Asian countries, compared with non-Asian samples (Elliott & Urquiza, 2006), which might be attributed to greater conservative cultural sexual norms and restraint in emotional expression in Asia (Elliott & Urquiza, 2006). The factors that potentiate child abuse might also differ between Western and Asian cultures (Nguyen et al., 2010).

As reviewed in Peltzer and Pengpid (2016) and Fry, McCoy, and Swales (2012), child abuse has been linked to adult poor mental health (posttraumatic stress disorder [PTSD], depression, and suicidal behavior), addictive behavior (tobacco and alcohol use and gambling), and other health-risk behaviors such as violence and sexual risk behavior. There is a lack of studies investigating child abuse among university students in the ASEAN. The aim of this study was to retrospectively estimate the prevalence of CEA, CPA, and CCSA in relation to adult poor mental health, addictive behavior, and other health-risk behaviors among university students in five ASEAN countries (Indonesia, Malaysia, Myanmar, Thailand, and Vietnam). The objectives of this study were as follows: (a) to describe the prevalence of child abuse among a large sample of ASEAN university students; (b) to analyse the separate contributions of three types of child abuse in relation to mental health, addictive behavior, and other health-risk behaviors; and (c) to examine the possible cumulative effects of various types of child abuse on mental health, addictive behavior, and other health-risk behaviors.

Methods

Participants

This cross-sectional study is part of a larger investigation of a range of health behaviors in university students in ASEAN countries. A convenience sampling method was used to select universities in each country. In all, 3,240 university students (*M* age = 20.5 years, *SD* = 1.6 years) from all five ASEAN countries agreed to participate: 231 in Indonesia, 386 in Myanmar, 783 in Thailand, 817 in Vietnam, and 1023 in Malaysia. Participation rates exceeded 90%, except for Indonesia (69%) and Myanmar (73%.) Almost two thirds of the participants (62.8%) were women, and 67.1% came from a lower SES backgrounds.

Procedures

The self-administered questionnaire used for data collection was available in English, then translated and back-translated into the languages of the participating study countries (Bahasa, Burmese, Thai, and Vietnamese). Research assistants employed at the participating universities asked classes of undergraduate students to complete the questionnaire at the end of a lecture period. In each participating country, the undergraduate students were studied in classrooms selected through a stratified random sample procedure. Each university department formed a cluster and was utilized as a primary sampling unit. One department was randomly selected from each university. For each selected department, the undergraduate courses offered by the department were randomly ordered. The students received no incentive for participation, and there were no penalties for refusing to complete the questionnaire. Informed consent was obtained from all participating students. Ethics approvals were obtained from all participating universities. The study was conducted in 2015.

Measures

Childhood abuse. The eight items of the Abuse section of the WHO (2015) Version 1 ACE-IQ was used to assess childhood abuse. Students were asked, "These next questions are about certain things YOU may have experienced. When you were growing up, during the first 18 years of your life…?": two questions for CEA, two questions for CPA, and four questions for CCSA. (See details in Table 1.) Response options were as follows: *many times*, *a few times*, *once*, *never*, and *refused*. Any *many times* response for the first emotional abuse question, *many times* or *a few times* response for the second emotional abuse question, and *many times* or *a few times* response for the physical abuse questions were scored as having experienced CEA and CPA, respectively; any *many times*, *a few times*, or *once* response on the sexual abuse questions were scored as having experienced CCSA (WHO, 2015; Centers for Disease Control and Prevention [CDC], 2016).

Sociodemographic variables. Sociodemographic variables included age, gender, country, and subjective socioeconomic family background. Social support was measured with three items from the Social Support Questionnaire (e.g., "If I were sick and needed someone to take me to a doctor, I would have trouble finding someone."; Brock, Sarason, Sarason, & Pierce, 1996). Response options ranged 1 (*completely true*) to 4 (*completely false*), Cronbach's $\alpha = 0.65$.

Mental health. Breslau's seven-item screen was used to identify PTSD symptoms in the past month (Kimerling et al., 2006). Questions asked whether the participant had experienced difficulties related to a traumatic experience (e.g. "Did you begin to feel more isolated and distant from other people?"). Response options were *yes* or *no*. Participants who scored four or more were classified as having a positive screen for PTSD (Kimerling et al., 2006), Cronbach's $\alpha = 0.78$.

The 10-item Center for Epidemiologic Studies Depression Scale (CES-D) was used to assess depressive symptoms (Andresen, Malaren,

Carter, & Patrick, 1994)-for example, "I was bothered by things that usually don't bother me." Response options ranged from 0 (*rarely [< 1 day]*) to 3 (*most [5–7 days]*). Scores of 15 or more were classified as severe depressive symptoms (Andresen et al., 1994), Cronbach's α = 0.69.

Suicidal behaviors were assessed using two questions adapted from a previous study (Osman et al., 2001): "Have you ever seriously thought about committing suicide?" (Suicidal ideation) and "Have you ever attempted suicide?" (Suicide attempt). Response options were *yes* or *no*.

Addictive behavior. Tobacco use was assessed with one question: "Do you currently use one or more of the following tobacco products (cigarettes, snuff, chewing tobacco, cigars, etc.)?" Response options were *yes* or *no* (WHO, 1998).

Hazardous or harmful alcohol use was assessed with the three-item Alcohol Use Disorder Identification Test, using a cutoff score of three for women and four for men for hazardous of harmful drinking (Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998). An example item is "How often did you have a drink containing alcohol in the past 12 months". The response option ranged from 0 (*never*) to 4 (*4 or more times a week*; Bush, Kivlahan, McDonell, Fihn, & Bradley, 1998), Cronbach's α = 0.70.

Illicit drug use in the past 12 months was assessed with one question: "How often have you taken drugs in the past 12 months, other than prescribed by the health care provider?" Response options ranged from 1 (*0 times*) to 4 (*10 or more times*).

Pathological Internet use was assessed using the Young Diagnostic Questionnaire for Internet Addiction (Young, 1999). This eight-item questionnaire utilizes DSM-IV diagnostic criteria for pathological gambling adjusted to pathological Internet use and has been validated in previous investigations (Siomos et al., 2012). The criteria are assessed through eight *yes* or *no* questions (e.g., "Do you feel the need to use the Internet and/or smartphone with increasing amounts of time in order to achieve satisfaction?"), resulting in a total score ranging from 0 to 8 and *pathological users* scoring 5 or more (Durkee et al. 2012), Cronbach's α = 0.70.

Other health risk behaviors. Seatbelt use was assessed with one question: "When driving or riding in the front seat of a car, do you wear a seatbelt?" Response options included 1 (*all of the time*), 2 (*some of the time*), 3 (*never*), and 4 (*I don't ride in cars*; Wardle & Steptoe, 1991). Inconsistent seatbelt use was defined as not wearing a seatbelt *all of the time*.

Physical fighting was assessed with one question: "During the past 12 months, how many times were you in a physical fight?" Response options ranged from *0 times* to *12 or more times* (CDC, 2015).

Sexual behavior was assessed with two questions: "Have you ever had sexual intercourse?" and "How old were you when you first had sexual intercourse?" Response options were *yes* or *no* and a numerical value (age in years; CDC, 2015).

Data Analysis

The data were analyzed using IBM SPSS (version 23.0). The proportion of sociodemographic factors, child abuse variables, mental health, addictive behaviors, and other risks was calculated as a percentage or in terms of means and standard deviations. Pearson's chi-square was used to test differences in proportions. Logistic regression analyses were conducted separately to calculate the adjusted odds ratio with a 95% CI to determine the associations between the potential determinants of CEA, CPA, and CCSA, adjusted for age, sex, year of study, subjective SES and country, and a number of dependent variables (mental health, addictive behavior, and other health risk behaviors). Predictor variables were entered in a single step.

Results

Child Abuse Prevalence

In all, the participants reported 17.6% CEA, 28.2% CPA, and 22.4% CCSA. CEA and CPA were higher in male than in female students, while intercourse was higher in female than in male students. In relation to the different types of child abuse, large country differences were observed, ranging from 8.6% CEA in Thailand to 30.9% CEA in Myanmar. CPA was the lowest in Thailand (0.4%) and the highest in Vietnam (66.8%), and CCSA was the lowest in Myanmar (1.6%) and the highest in Vietnam (41.6%). In all, 55.8% of the participants had not experienced any childhood abuse: 26.1% had experienced one type, 13.3% had experienced two types, and 4.8% had experienced all three types (see Table 1).

Table 1
Child Abuse Experiences

	All	Male	Female	Indonesia	Malaysia	Myanmar	Thailand	Vietnam
	N (%)	%	%	%	%	%	%	%
Emotional abuse	569 (17.6)	22.6***	14.6	10.8	11.4	30.9	8.6	29.5
Many times a parent, guardian, or other household member yelled, screamed, or swore at you, insulted you, or humiliated you	320 (9.9)	12.5***	8.3	5.6	6.6	28.8	4.5	11.4
A few or many times a parent, guardian, or other household member threatened to, or actually, abandoned you or threw you out of the house	358 (11.1)	15.4***	8.5	5.2	6.9	7.8	5.1	25.1
Physical abuse	913 (28.2)	39.6***	21.4	17.7	26.4	13.8	0.4	66.8
A few or many times a parent, guardian, or other household member spanked, slapped, kicked, punched, or beat you up	811 (25.0)	34.5***	19.5	17.7	20.9	11.7	0.4	62.2
A few or many times a parent, guardian, or other household member hit or cut you with an object such as a stick (or cane), bottle, club, knife, whip, etc.	268 (8.3)	13.5***	5.2	3.0	13.6	6.0	0.4	11.9
Contact sexual abuse	724 (22.4)	21.5	23.0	10.0	12.7	1.6	28.9	41.6
Ever someone touch or fondled you in a sexual way when you did not want them to	526 (16.3)	17.9	15.3	4.3	11.3	1.0	14.3	34.8
Ever someone made you touch their body in a sexual way when you did not want them to	363 (11.2)	13.0*	10.2	8.7	5.2	0.8	13.0	22.6
Ever someone attempted oral, anal, or vaginal intercourse with you when you did not want them to	181 (5.6)	6.2	5.2	4.3	3.2	0.3	7.7	9.4
Ever someone actually had oral, anal, or vaginal intercourse with you when you did not want them to	248 (7.7)	5.2	9.1***	1.3	1.7	0.3	20.5	8.2

$^* p < .05.$ $^{***} p < .001.$

In terms of gender differences for child abuse categories by country, CEA was higher among men than among women in Malaysia, Myanmar, and Thailand, whereas there were no differences in Indonesia or Vietnam. Further, CPA was higher among men than among women in Malaysia and Myanmar, whereas there were no gender differences in Indonesia, Thailand, or Vietnam. Finally, CCSA was higher among women than among men in Vietnam, and it was higher among men than women in Indonesia, whereas there no significant gender differences for the remaining countries (see Table 2).

Descriptive of mental health, addictive behavior, and other risks are shown in Table 3. In terms of mental health, 24.4% of the

Table 2

Gender Differences in Child Abuse by Country

Country	Gender	Sample		Emotional abuse		Physical abuse		Contact sexual abuse	
		N	N (%)	p-value	N (%)	p-valuea	N (%)	p-value[a]
Indonesia (N = 231)	Male	55	22 (12.5)	0.212	8 (14.5)	0.549	11 (20.0)	0.004
	Female	176	3 (5.5)		33 (18.8)		12 (6.8)	
Malaysia (N = 1023)	Male	501	67 (13.4)	0.049	157 (31.3)	< 0.001	66 (13.2)	0.619
	Female	519	49 (9.4)		112 (21.6)		63 (12.1)	
Myanmar (N = 386)	Male	172	64 (37.2)	0.020	34 (19.8)	0.002	3 (1.8)	0.788
	Female	213	55 (25.9)		19 (9.0)		3 (1.4)	
Thailand (N = 783)	Male	73	12 (16.4)	0.025	0 (0.0)	1.000	26 (35.6)	0.184
	Female	710	55 (7.7)		3 (0.4)		200 (28.2)	
Vietnam (N = 817)	Male	403	126 (29.6)	0.283	278 (69.0)	0.234	152 (37.8)	0.028
	Female	413	115 (27.8)		268 (64.9)		187 (45.4)	

[a]Gender difference

Table 3

Mental Health and Other Risks and Child Abuse

Variable	All	Emotional abuse	Physical abuse	Contact sexual abuse
	N (%)	N (%)	N (%)	N (%)
Mental health				
PTSD	792 (24.4)	125 (38.2)	295 (32.3)	257 (35.5)
Depression	340 (10.5)	85 (14.6)	88 (9.8)	105 (14.6)
Suicidal ideation	376 (11.6)	121 (21.0)	166 (18.4)	136 (19.0)
Suicide attempt	87 (2.7)	21 (3.7)	22 (2.5)	38 (5.5)
Addictive behavior				
Tobacco use	107 (3.3)	20 (6.1)	26 (2.8)	16 (2.2)
Hazardous or harmful alcohol use	513 (15.9)	55 (17.1)	93 (10.2)	151 (20.9)
Drug use	255 (8.2)	54 (17.8)	54 (6.0)	43 (6.1)
Pathological Internet use	1161 (35.9)	124 (37.9)	361 (39.5)	328 (45.3)
Other risk behavior				
Not always wearing a seatbelt	1981 (61.3)	2228 (70.2)	654 (71.7)	531 (73.5)
Has been in a physical fight	200 (6.2)	37 (11.3)	60 (6.6)	32 (4.4)
Had sex before 18 years	57 (2.0)	7 (3.2)	9 (1.0)	33 (4.6)

participants screened positive for PTSD, 10.5% for severe depression, 11.6% for suicidal ideation, and 2.7% for suicide attempt. Regarding addictive behaviors, 3.3% were current tobacco users, 15.9% were hazardous or harmful alcohol users, 8.2% were drug users other than as prescribed by a health care provider, and 35.9% engaged in pathological Internet use. Other risk included not always wearing a seatbelt (61.3%), having been in a physical fight in the past 12 months (6.2%), and having had sex before the age of 18 years (2.0%; see Table 3).

Child Abuse Associations

The adjusted odds ratios for the associations between CEA, CPA, and CCSA (independent

Table 4

Child Abuse in Relation to Mental Health, Addictive Behavior, and Other Risk Behavior

	AOR (95% CI)[a]	AOR (95% CI)[a]	AOR (95% CI)[a]	AOR (95% CI)[a]
	Mental health			
	PTSD	Depression	Suicide ideation	Suicide attempt
Emotional abuse	1.85 (1.43–2.39)***	2.29 (1.69–3.11)***	1.82 (1.40–2.37)***	1.71 (0.99–2.96)
Physical abuse	1.31 (1.08–1.58)**	1.05 (0.77–1.43)	1.49 (1.15–1.94)**	0.79 (0.45–1.41)
Contact sexual abuse	1.79 (1.48–2.16)***	1.61 (1.25–2.09)***	1.81 (1.42–2.30)***	3.00 (1.92–4.67)***
Child abuse type				
None	Reference	Reference	Reference	Reference
One type	1.59 (1.31–1.93)***	1.54 (1.18–2.02)**	1.80 (1.37–2.35)***	1.80 (1.09–2.97)*
Two types	2.61 (2.05–3.31)***	2.78 (1.99–3.90)***	3.29 (2.44–4.45)***	2.43 (1.29–4.58)**
Three types	3.78 (2.66–5.37)***	3.22 (1.89–5.50)***	4.21 (2.79–6.33)***	4.85 (2.19–10.76)***
	Addictive behavior			
	Tobacco use	Hazardous or harmful alcohol use	Drug use	Pathological Internet use
Emotional abuse	2.45 (1.43–4.20)***	1.38 (0.99–1.91)	3.57 (2.50–5.11)***	1.08 (0.84–1.38)
Physical abuse	0.49 (0.30–0.81)**	0.42 (0.33–0.55)***	0.62 (0.44–0.87)**	1.15 (0.97–1.37)
Contact sexual abuse	0.72 (0.41–1.27)	1.69 (1.35–2.12)***	0.78 (0.54–1.11)	1.56 (1.31–1.86)***
Child abuse				
None	Reference	Reference	Reference	Reference
One type	0.73 (0.41–1.31)	1.18 (0.70–1.98)	1.09 (0.80–1.48)	1.46 (1.23–1.74)***
Two types	1.13 (0.60–2.13)	1.53 (0.76–3.09)	1.03 (0.70–1.50)	1.97 (1.58–2.47)***
Three types	0.23 (0.03–1.68)	1.79 (0.61–5.29)	0.48 (0.23–1.02)	2.25 (1.60–3.17)***
	Other risk behavior			
	Not always wearing a seatbelt	Has been in a physical fight	Had sex before 18 years	
Emotional abuse	1.28 (0.98–1.62)	1.84 (1.23–2.75)**	1.74 (0.74–4.10)	
Physical abuse	1.69 (1.41–2.04)***	0.99 (0.70–1.41)	0.25 (0.11–0.54)***	
Contact sexual abuse	1.60 (1.32–1.95)***	0.63 (0.42–0.96)*	5.10 (2.93–8.88)***	
Child abuse				
None	Reference	Reference	Reference	
One type	1.34 (1.11–1.61)**	0.91 (0.65–1.28)	5.11 (2.81–9.29)***	
Two types	1.53 (1.18–1.99)***	0.72 (0.46–1.12)	2.89 (1.16–7.17)*	
Three types	1.80 (1.14–2.82)***	0.75 (0.40–1.42)	4.52 (1.25–16.41)*	

Note. AOR refers to Adjusted Odds Ratio. Reference refers to the reference category in regression.
[a]Adjusted for age, sex, subjective SES, social support, and study country.
*$p < .05$. **$p < .01$. ***$p < .001$.

variables) and poor mental health, addictive behaviors, and other risk variables (dependent variables) are shown in Table 4. In the logistic regression models, adjusting for age, sex, study year, subjective SES, social support, and country, having experienced CEA was associated with increased odds of poor mental health (PTSD, depression symptoms, and suicidal ideation), addictive behavior (tobacco use and illicit drug use), and other health-risk behaviors (having been in a physical fight). CPA was found to be associated with poor mental health (PTSD and suicidal ideation), to be inversely associated with addictive behavior (tobacco use, hazardous or harmful drinking, and drug use), to be positively associated with not always wearing a seatbelt, and to be negatively associated with early sex (before age 18 years). CCSA was positively associated with all four poor mental health indicators (PTSD, depression, suicidal ideation, and suicide attempt), two addictive behaviors (hazardous or harmful alcohol use and pathological Internet use), and two health-risk behaviors (not always wearing a seatbelt and early sex). Moreover, in adjusted logistic regression models, having experienced multiple types of child abuse was strongly associated with increased odds of poor mental health (PTSD, depression symptoms, suicidal ideation, and suicide attempt), addictive behavior (pathological Internet use), and other health-risk behaviors (not always wearing a seatbelt and early sex; see Table 4).

Discussion

In this large sample of university students from five ASEAN countries, there was a high prevalence of child abuse (17.9% CEA, 28.2% CPA, and 22.4% CCSA), which largely compares to the results from other studies of youth populations in ASEAN countries (Chaopricha & Jirapramukpitak, 2010; Choo et al., 2011; Jirapramukpitak et al., 2005; Tran et al., 2015) and is higher than in a large multicountry study of university students in Africa, Asia, and the Americas (Peltzer & Pengpid, 2016).

The results indicate that CPA ranked highest of the abuse types, which compares to previous studies (Bellis et al., 2014; Fang et al., 2015; Lau, Liu, Cheung, &Yu, 1999). However, CCSA perhaps needs more attention because more than one in five participants reported having experienced CCSA. In all, 26.1% had experienced one type of abuse, 13.3% had experienced two types of abuse, and 4.8% had experienced three types of abuse. This finding compares to studies of adolescents in Vietnam- one (25.9%), two (20.7%), three (14.5%), and four (6.3%) abuse types (Nguyen et al., 2010)- and in Malaysia-22.1% more than one abuse type and 3% all four abuse types (Choo et al., 2011).

Our results indicate differences in the prevalence of abuse between five countries, ranging from under 2% to over 30%. Vietnam showed the highest prevalence of CPA and CCSA, whereas Myanmar showed the highest prevalence of CEA. This could mean that Vietnamese child protection agencies should emphasize physical and sexual abuse, whereas Myanmar child protection agencies should emphasize emotional support and respect for children's emotional needs (Nguyen et al., 2010). On the other hand, Myanmar showed the lowest prevalence of CCSA, and Thailand showed the lowest prevalence of CEA and CPA. Due to the importance of CCSA, differences in CCSA reporting between countries might need attention. These differences could be explained by cultural factors affecting students on choosing to disclose incidents of CCSA. Fontes and Plummer (2010) suggested that issues such as shame, honor, and respect present differently and are weighted differently in various cultures, perhaps leading to CCSA self-concealment and explaining the different prevalence rates between countries.

Our results showed CEA and CPA to be more prevalent in male students and showed CCSA to be more prevalent in female students. These findings compare to the results from previous studies (Daigneault, Hébert, & McDuff, 2009; Thompson, Kingree, & Desai, 2004). Differences between gender in CCSA could be

explained by a higher hesitancy disclose CCSA among men compared to women (Dhaliwal, Gauzas, Antonowicz, & Ross, 1996; Stoltenborgh, van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011) and society's view of men to be resilient rather than to be yielding (Dhaliwal et al., 1996; Stoltenborgh et al., 2011). This could also explain the possible gender differences of CEA in Malaysia, Myanmar, and Thailand; CPA in Malaysia and Myanmar; and CCSA in Vietnam and Indonesia.

Our results compare to previous reviews (Fry et al., 2012; Peltzer & Pengpid, 2016) indicating that experiencing CEA, CPA, and/or CCSA is associated with the experience of poor adult mental health (PTSD, depression, and suicidal behavior), addictive behavior (tobacco use, hazardous or harmful alcohol use, and pathological Internet use), and other health-risk behaviors (not always wearing a seatbelt and early sex). Consistent with the results from previous studies (Arata et al., 2007; Chaopricha & Jirapramukpitak, 2010; Jirapramukpitak et al., 2005; Nguyen et al., 2010), our results indicate that victims of multiple type of abuse had significantly more mental health and behavioral problems, supporting the additive model of child abuse effects.

Finally, our results indicated a significant prevalence of PTSD and depression, which compares to the results from previous studies among university students in southeast Asia and elsewhere (Peltzer & Pengpid, 2014; Peltzer & Pengpid, 2015). The high prevalence of childhood abuse experiences and mental symptoms in this university student population calls for interventions to be designed to enhance childhood abuse protection and survivor programmes and to prevent the onset of mental disorders and health-risk behaviors.

Study Limitations

The study was cross-sectional in nature, so causal conclusions could not be drawn. The investigation was carried out with students from one university in each country; thus, the inclusion of other universities could have

resulted in different results. University students are not representative of young adults in general, and CEA, CPA, and CCSA and health-risk behaviors could differ in other sectors of the population. Moreover, the data were based on self-report, which could be subject to bias in reporting such sensitive personal information. Future research should assess familial factors such as parental relationship and parent–child interactions that could contribute to adult mental health and behavioral problems.

Conclusion

Our results indicated a high prevalence of CEA (18%), CPA (28%), and CCSA (22%) among a large sample of ASEAN university students from five countries. The separate and cumulative effects of three types of child abuse (emotional, physical, and sexual) were found to increase the risk for poor adult mental health, addictive, and other health-risk behaviors. Future interventions should target childhood abuse protection and survivor programmes to prevent the onset of mental disorders and health-risk behaviors in adulthood.

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