

Adverse Childhood Experiences and ICD-11 PTSD / CPTSD in East Asia

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IN THIS PRESENTATION...

- 1. Adverse childhood experiences (ACEs)**
- 2. ICD-11 PTSD and Complex PTSD**
- 3. Findings from Hong Kong and East Asia**

Adverse Childhood Experiences (ACEs)

- Stressful or traumatic events in first 18 years of life
 - Childhood maltreatment, serious household dysfunction, violence exposure outside the home
- Pervasive across social and cultural settings¹
- Dose-dependent relationships between number of ACEs and poorer outcomes²

¹Kessler, R. C., McLaughlin, K. A., Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., . . . Williams, D. R. (2010). Childhood adversities and adult psychopathology in the WHO World Mental Health Surveys. *British Journal of Psychiatry*, 197(5), 378-385.

²Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., . . . Marks, J. S. (1998). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults. The Adverse Childhood Experiences (ACE) Study. *American Journal of Preventive Medicine*, 14(4), 245-258.

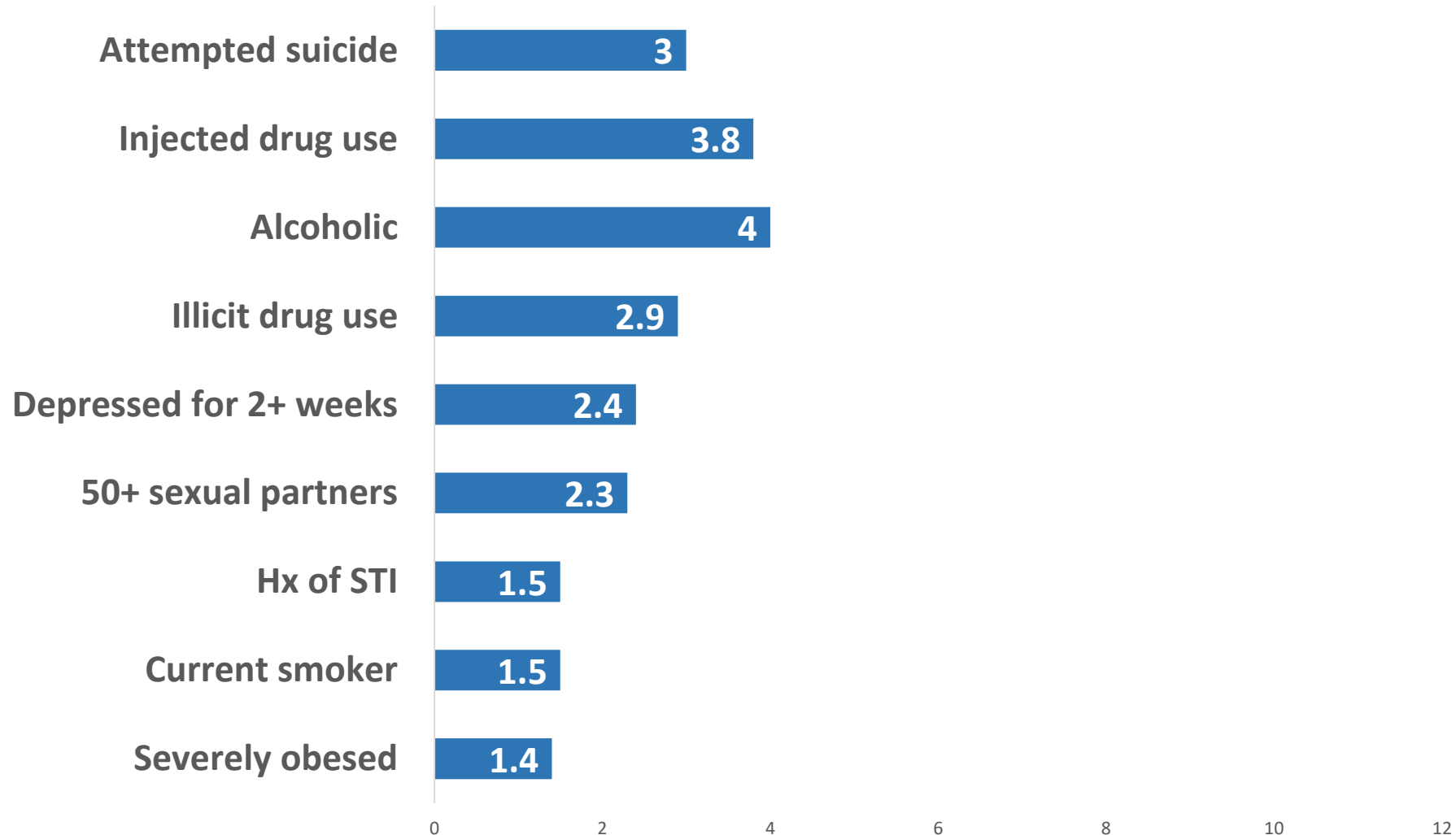
Global Statistics on ACEs (n=51,945)

Table 1 Prevalence of childhood adversities in World Mental Health (WMH) surveys carried out in high-, high-middle-, and low/lower-middle-income countries

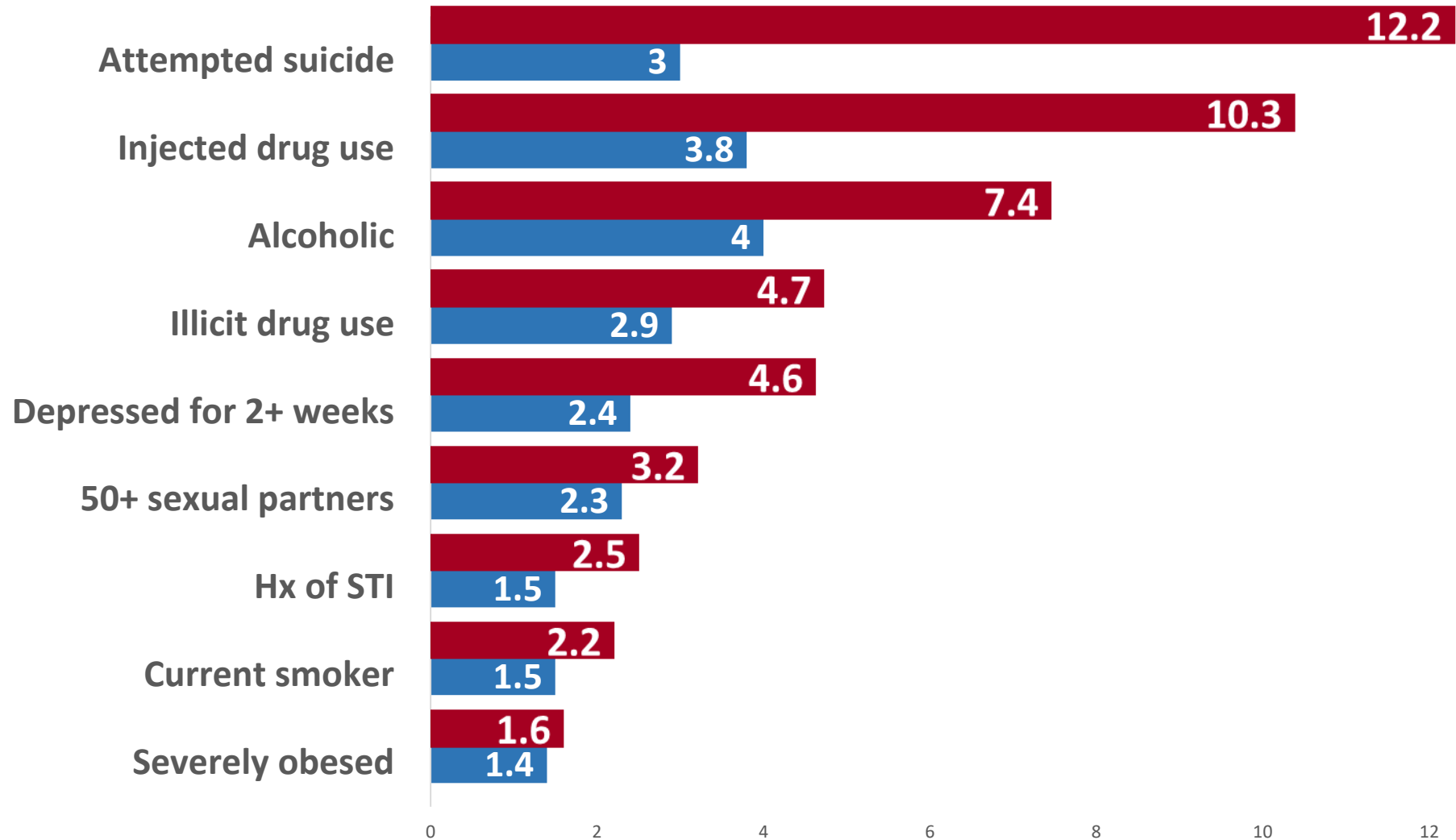
	High-income countries (n= 20 652)		High-middle-income countries (n= 15 240)		Low-/lower-middle-income countries (n= 16 053)		Total (n= 51 945)	
	%	(s.e.)	%	(s.e.)	%	(s.e.)	%	(s.e.)
V. Total number of childhood adversities ^a								
Any	38.4	(0.5)	38.9	(0.6)	39.1	(0.6)	38.8	(0.4)
One/any	59.3	(0.7)	59.6	(0.8)	66.2	(0.9)	61.5	(0.5)
Two/any	22.5	(0.6)	24.6	(0.8)	21.8	(0.7)	22.9	(0.4)
Three/any	9.0	(0.4)	9.0	(0.5)	7.5	(0.5)	8.5	(0.3)
Four/any	5.0	(0.4)	4.1	(0.3)	3.1	(0.3)	4.1	(0.2)
Five or more/any	4.2	(0.2)	2.7	(0.3)	1.4	(0.2)	2.9	(0.2)

a. Prevalence estimates in the last five rows represent the proportions of all respondents with any childhood adversity who have exactly one, two, three, four, five or more. These five proportions sum to 100% in each column.

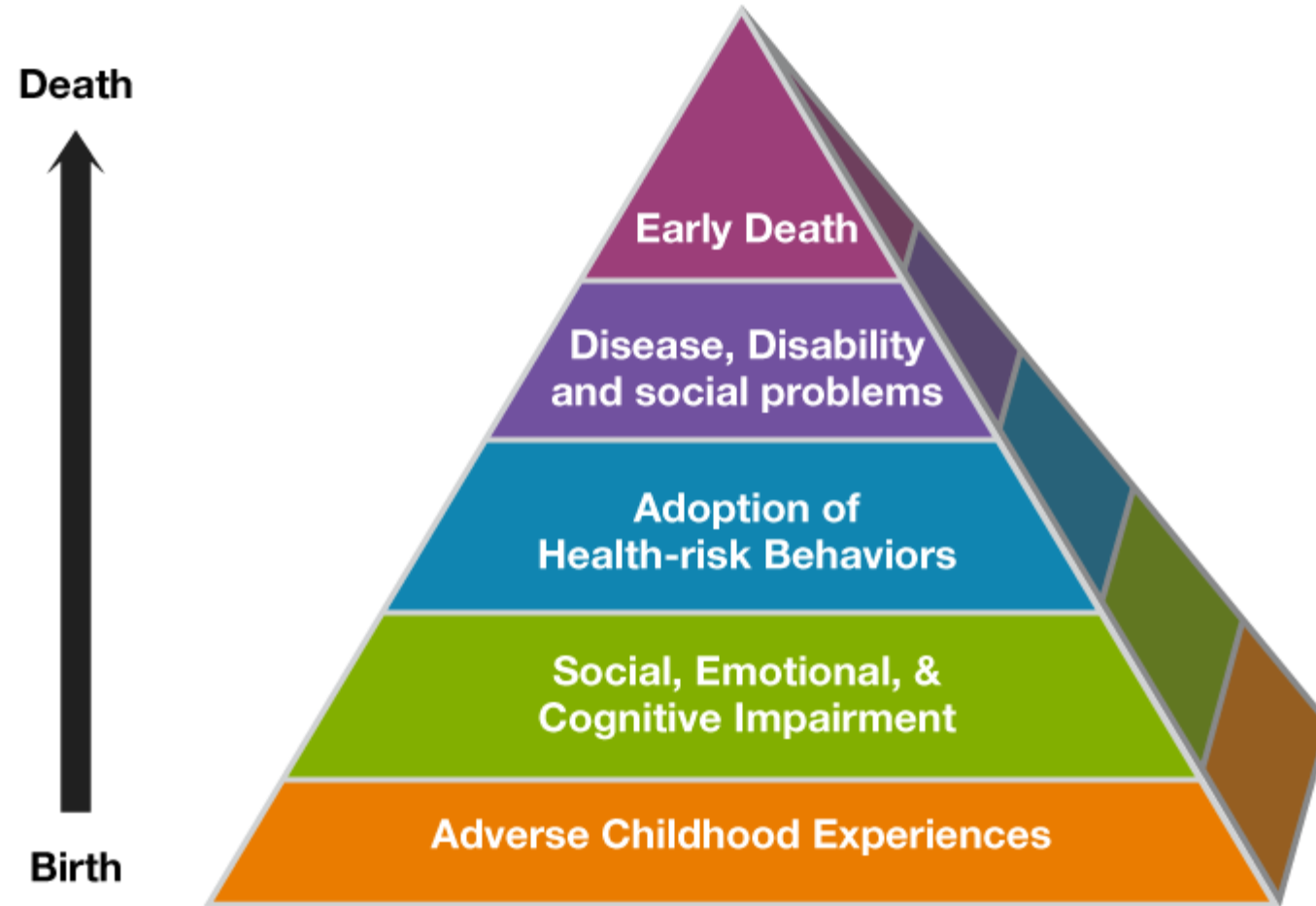
Compared to **no ACEs**, the odds for someone with **2 ACEs**:



Compared to **no ACEs**, the odds for someone with **4+ ACEs**:



Life Course Perspective on Childhood Trauma



The ACEs Pyramid | World Health Organization

Childhood Adversities and Psychopathology

Table 4 Population attributable risk proportions (PARPs) of childhood adversities predicting lifetime DSM-IV/CIDI disorders by type of disorder and life-course stage^a

	Childhood, age 4–12	Adolescence, age 13–19	Early adulthood, age 20–29	Later adulthood, age 30+	Total
IV. Total					
Mood disorders	59.5	32.6	24.2	13.6	22.9
Anxiety disorders	31.1	30.3	36.7	28.3	31.0
Behaviour disorders	49.6	36.2	17.4	– ^b	41.6
Substance disorders	62.3	30.0	28.9	34.2	27.5
All disorders	38.2	32.3	29.0	21.8	29.8

Eradicating ACEs can eliminate nearly 30% of all mental disorders worldwide.

***We shouldn't be asking "What's wrong with you."
Instead, we should be asking "What happened to you."***

American Academy of Pediatrics, 2014

ICD-11 PTSD and Complex PTSD

ICD-11 PTSD and Complex PTSD

ICD-11, published in June 2018, proposes two distinct but related disorders under new grouping of “*Disorders specifically associated with stress*”

“Gate” Criterion: Traumatic Stressor		
PTSD	Complex PTSD	
{	Re-experiencing	}
	Avoidance	
	Sense of Threat	
		PTSD symptoms
	{	
	Affect Dysregulation	
	Negative Self Concept	
	Disturbed Relationships	
		Disturbances in Self-Organization (DSO) symptoms
Functional Impairment	Functional Impairment	

Diagnosis is either PTSD or CPTSD; If PTSD and DSO criteria met = CPTSD
Type of trauma is a risk factor, not a requirement for a diagnosis

International Trauma Questionnaire (ITQ)

- Self-report measure of ICD-11 PTSD and CPTSD diagnoses
 - 6 items measuring core symptoms of PTSD
 - 6 items measuring core symptoms of DSO
 - 6 items measuring functional impairments (adult version)
 - 10 items measuring functional impairments (child and adolescent version)
- Performed the first Chinese and Japanese translations and validation of the ITQ in Hong Kong, mainland China, Taiwan, and Japan¹
 - **1300+** young adults in the region, **1000+** randomly sampled Hong Kong adults
 - First to demonstrate stability of the ITQ (test-retest at 2-3 weeks)
 - Semantic equivalence between Chinese and English versions
 - Support factorial validity and concurrent validity of the ITQ with trauma exposure (ACEs) and key mental health criterion variables (depression, anxiety, stress)
- Recently tested the Chinese ITQ - Child and Adolescent version (ITQ-CA)²
 - Clinical sample of **100+** adolescents diagnosed with a mood disorder
- The ITQ is freely accessible at www.traumameasuresglobal.com

¹Ho, G. W. K., Karatzias, T., Cloitre, M., Chan, A. C. Y., Bressington, D., Chien, W. T., . . . Shevlin, M. (2019). Translation and validation of the Chinese ICD-11 International Trauma Questionnaire (ITQ) for the Assessment of Posttraumatic Stress Disorder (PTSD) and Complex PTSD (CPTSD). *Eur J Psychotraumatol*, 10(1), 1608718. doi:10.1080/20008198.2019.1608718

²Ho, G.W.K., Liu, H., Karatzias, T., Hyland, P., Cloitre, M., Lueger-Schuster, B., Brewin, C.R, Guo, C., Wang, X., & Shevlin, M. (2022). Validation of the International Trauma Questionnaire – Child and Adolescent Version (ITQ-CA) in a Chinese mental health service seeking adolescent sample. *Child and Adolescent Psychiatry and Mental Health*. doi: 10.1186/s13034-022-00497-4

Rates of PTSD and CPTSD

Sample	PTSD	CPTSD
Young Adults in East Asia (n=1346) Hong Kong (n=428); Mainland China (n=340); Taiwan (n=254); Japan (n=324)	1.9%	3.6%
General Hong Kong Adults (n=1070)	1.6%	4.2%
Adolescents (clinical)- Mainland China (n=111)	6.3%	55.9%

ACEs and Health: Findings from Hong Kong and East Asia

ACE Survey in Hong Kong (n=433)

Translated the **WHO ACE-International Questionnaire**,
a 29-item measure of 13 ACEs:

- **Childhood maltreatment**

(1) Emotional neglect; (2) Physical neglect; (3) Sexual abuse;
(4) Emotional abuse; (5) Physical abuse

- **Serious household dysfunction**

(6) Household substance misuse; (7) Household member incarceration;
(8) Household member with mental illness; (9) Parental separation or death;
(10) Witnessing domestic violence

- **Peer/ community victimization**

(11) Bullying; (12) Community violence; (13) War/collective violence

Sample Characteristics and ACE Score (n=433)

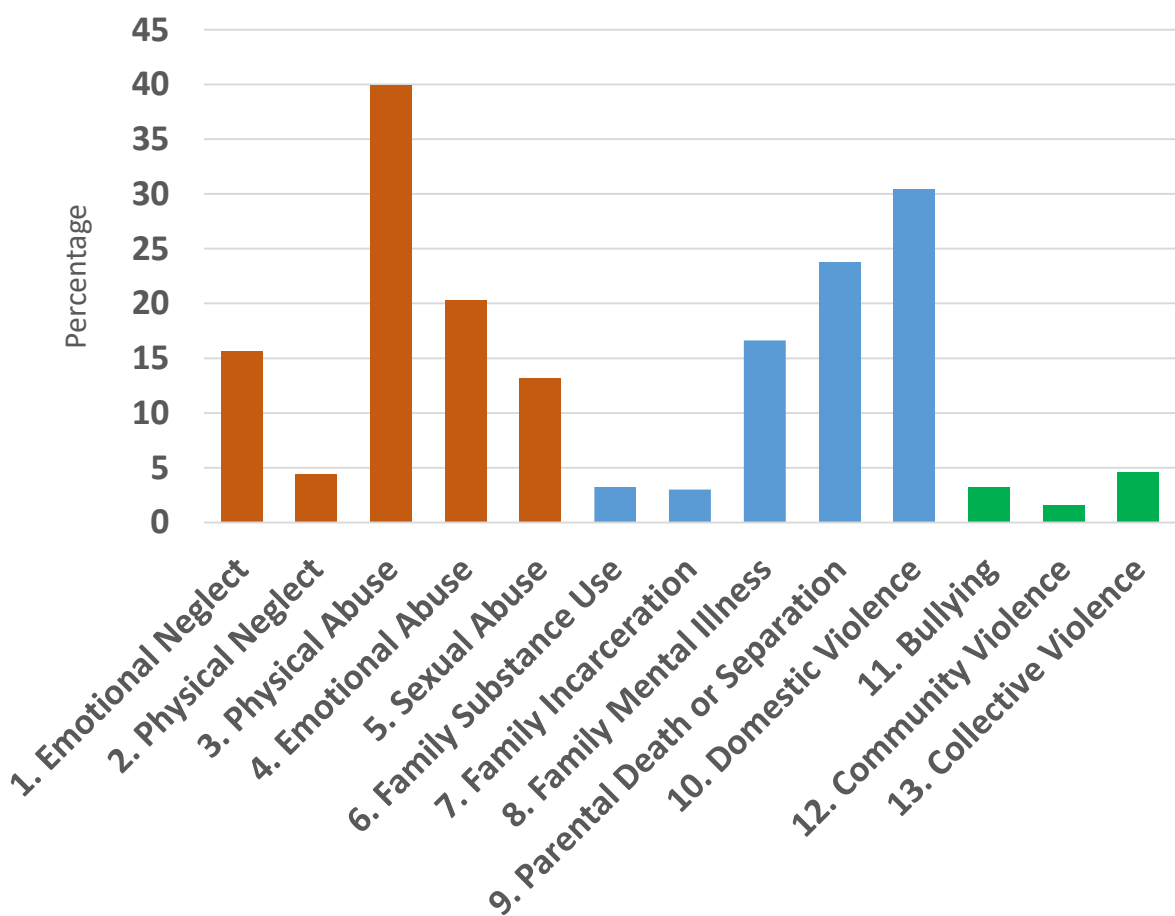
Age (mean, SD)	20.16 (1.67)
Male (n, %)	178 (41.1)
Bachelor degree student (n, %)	215 (49.65)
Number of ACEs (n, %)	
0	25.64
1	28.18
2	15.01
3	12.47
4	11.78
5	3.46
6	2.31
7 or more	1.15

1 in 4 had no ACE

43% had 1-2 ACEs

Over 30% had 3 or more ACEs

Exposure by ACE Category (N=433)



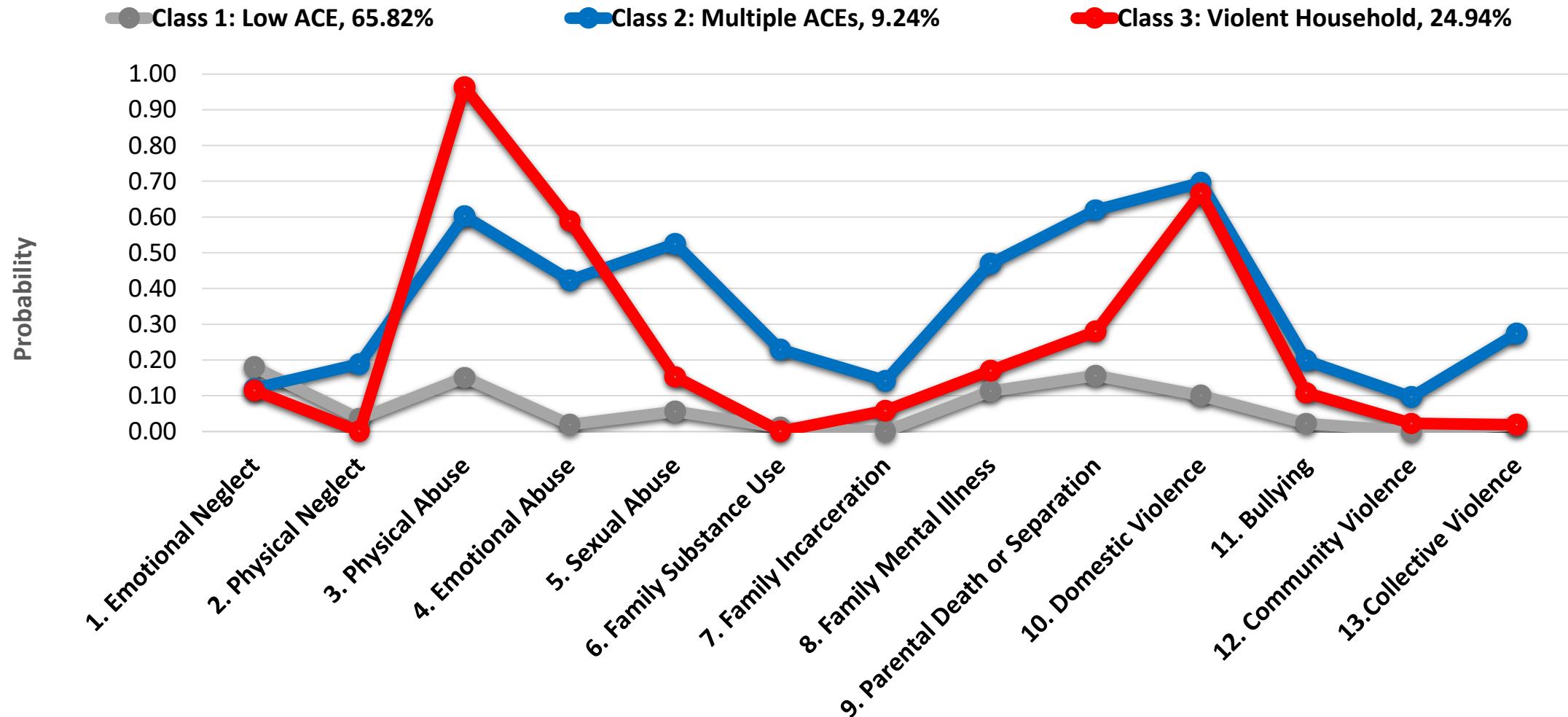
Childhood Maltreatment		%
1. Emotional Neglect		15.70
2. Physical Neglect		4.39
3. Physical Abuse		39.95
4. Emotional Abuse		20.32
5. Sexual Abuse		13.16
Household Dysfunction		%
6. Family Substance Use		3.23
7. Family Incarceration		3.00
8. Family Mental Illness		16.63
9. Parental Death or Separation		23.79
10. Domestic Violence		30.48
Peer/ Community Victimization		%
11. Bullying		3.24
12. Community Violence		1.62
13. Collective Violence		4.62

Cumulative risk approach (ACE score)

- Hong Kong sample (n=433)
- Depressive and anxiety symptoms did not associate with ACEs
- Maladjustment symptoms worse for those with 3+ ACEs
- Compares with no ACE, odds of PTSD/CPTSD:
 - 4.7 times higher for those with 4 ACEs
 - 5.7 times higher for those with 5+ ACEs

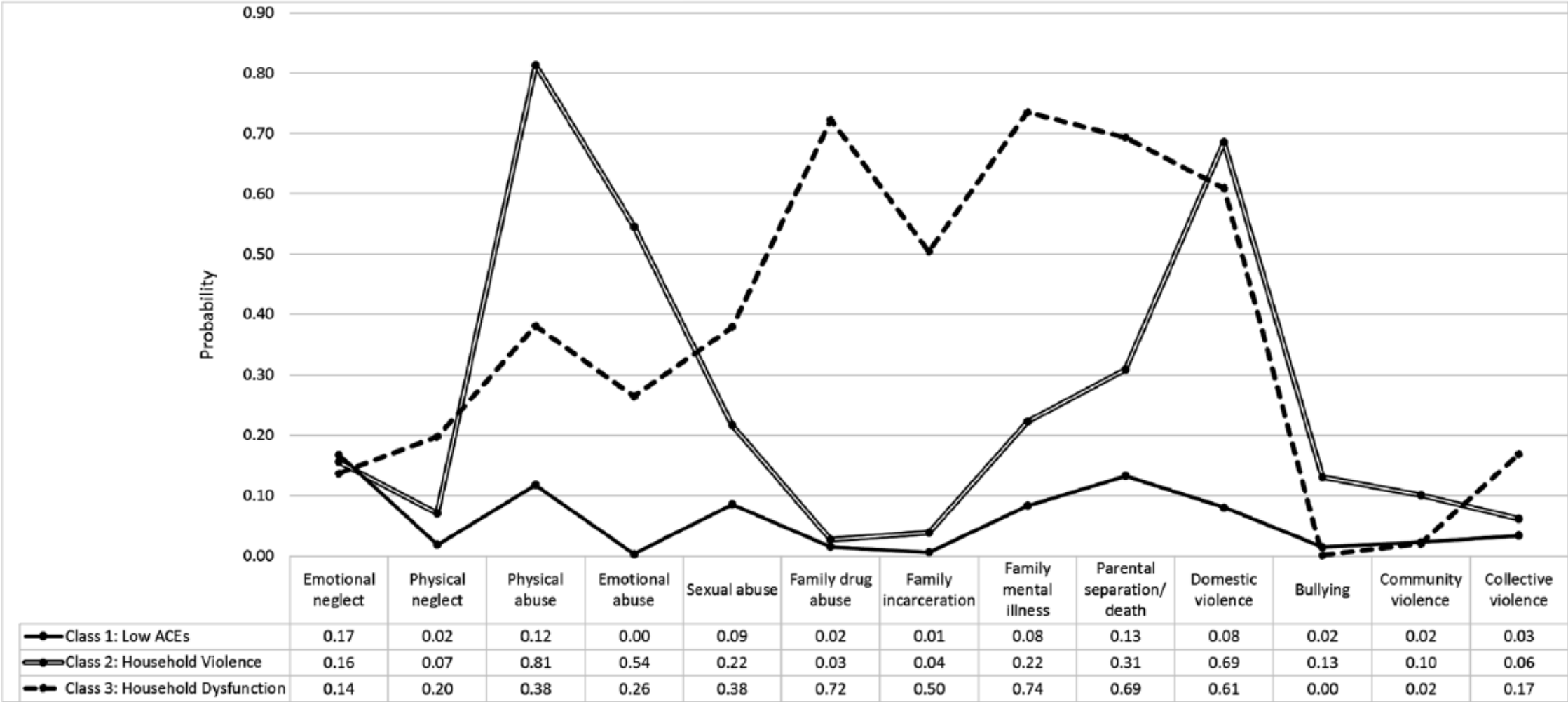
Latent class analysis of young adults in Hong Kong (n=433):

Three Patterns of ACE Exposure



Latent class analysis of young adults in Hong Kong, China, Japan, and Taiwan (n=1346):

Three Patterns of ACE Exposure



Pattern-based approach

- East Asia sample

	Class 1: Low ACEs (<i>n</i> = 1023, 76.00%)	Class 2: Household Violence (<i>n</i> = 277, 20.58%)	Class 3: House- hold Dysfunction (<i>n</i> = 46, 3.42%)
ACE score* (SD)	0.79 (0.85)	3.56 (1.29)	5.07 (1.51)

Table 3 Multiple regression analyses predicting mental health outcomes by class membership (*n* = 1346)

Predictors	Depression coefficient (95% CI)	Anxiety coefficient (95% CI)	Maladjustment coefficient (95% CI)	PTSD/CPTSD odds ratio (95% CI)
Class (Ref: Class 1: Low ACEs)				
Class 2: Household Violence	1.23* (0.10, 2.36)	1.88** (1.19, 2.57)	7.26* (3.33, 11.20)	3.75** (2.65, 5.31)
Class 3: Household Dysfunction	0.43 (− 1.50, 2.36)	1.18** (0.68, 1.68)	3.84 (− 2.88, 10.56)	4.74** (4.30, 5.23)
Age	−0.04 (− 0.43, 0.36)	−0.02 (− 0.34, 0.29)	0.62* (0.09, 1.15)	1.12 (0.96, 1.30)
Gender (Ref: Male)	−0.54 (− 1.98, 0.91)	−0.13 (− 0.73, 0.46)	2.74** (1.37, 4.12)	1.11 (0.87, 1.42)

All analyses adjusted for clustering by region (i.e., Hong Kong, China, Taiwan, and Japan); 95% CI, 95% confidence interval

*Significant at $p < 0.05$; **significant at $p < 0.01$

Population Survey of Hong Kong Adults (n=1070)

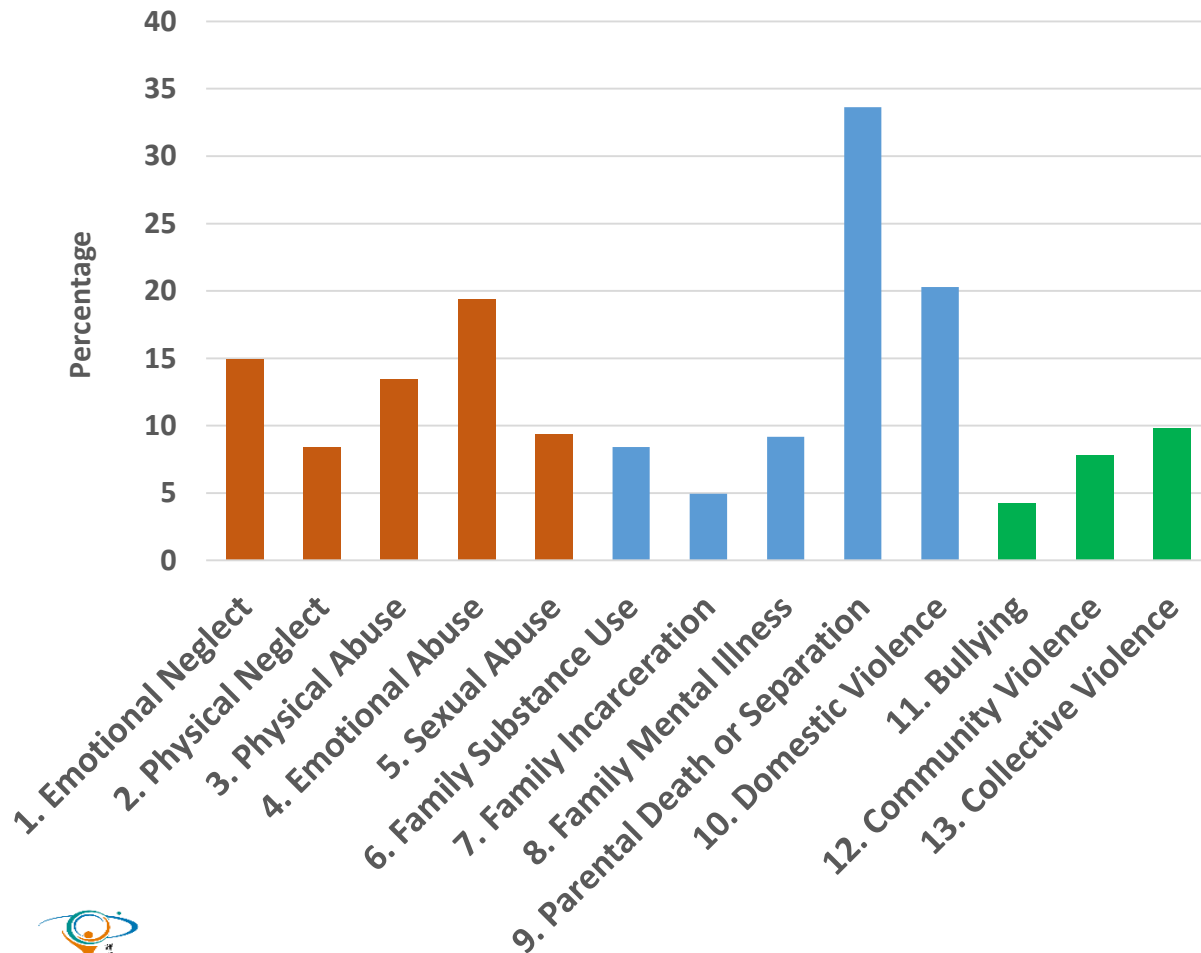
Age (mean, SD)	41.78 (13.06)
Male (n, %)	493 (46.07)
Highest education attained (n, %)	
Below secondary school	164 (15.33)
Completed secondary school	539 (50.37)
Above secondary school	367 (34.30)
Number of ACEs (n, %)	
0	421 (39.35)
1	245 (22.90)
2	144 (13.46)
3 – 4	151 (14.11)
5 or more	109 (10.19)

Less than 1 in 2 people

Around 1 in 3 people

Around 1 in 4 people

Exposure by ACE Category (N=1070)



Childhood Maltreatment	Each %	Any %
1. Emotional Neglect	14.89	43.18
2. Physical Neglect	8.41	
3. Physical Abuse	13.46	
4. Emotional Abuse	19.35	
5. Sexual Abuse	9.35	

Household Dysfunction	Each %	Any %
6. Family Substance Use	8.41	44.11
7. Family Incarceration	4.95	
8. Family Mental Illness	9.16	
9. Parental Death or Separation	33.64	
10. Domestic Violence	20.28	

Peer/ Community Victimization	Each %	Any %
11. Bullying	4.21	18.22
12. Community Violence	7.76	
13. Collective Violence	9.81	

<u>Physical Health</u>	N	%	Adjusted OR (Ref: 0 ACE)			
			1	2	3-4	5 or more
Any	233	21.8	1.7308*	2.3479**	2.7352**	8.9708**
Cardio+Stroke	51	4.77	2.044	3.449*	2.493	6.264**
Respiratory	43	4.02	2.733	3.199*	4.129**	11.305**
Liver	19	1.78	3.832	.766	8.740*	17.673**
DM	56	5.23	1.0797	2.1170	2.8938*	5.3230**

<u>Mental Health</u>	N	%	Adjusted OR/ Coefficient (Ref: 0 ACE)			
			1	2	3-4	5 or more
Mental Illness Dx	17	1.59	6.779*	5.175	13.757**	9.931*
ICD_PTSD	18	1.68	.954	1.689	.709	4.149*
ICD_CPTSD	45	4.21	21.371*	23.374*	30.880*	508.195**
Suicidal Thought	65	6.07	4.190**	3.8959**	6.2884**	16.5222**
Suicidal Act	15	1.40	16.655	3.087	28.205*	67.021**
Depression			3.188**	5.029**	5.148**	13.335**
Anxiety			3.030**	3.451**	3.909**	12.348**
Stress			3.484**	5.300**	5.723**	13.350**

<u>Behavior Health</u>	N	%	Adjusted OR (Ref: 0 ACE)			
			1	2	3-4	5 or more
Smoking	180	16.8	1.6362	3.0557**	3.5516 **	8.3922**
Illicit Substance	66	6.17	8.4732	25.187**	40.710**	219.72**
Binge Drinking	176	16.5	1.3909	2.1052*	2.7430**	12.668**

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