Supplement

Exploring transdiagnostic stress and trauma-related symptoms across the world: a latent class analysis

Stephanie Haering*, Marike J. Kooistra*, Christine Bourey, Ulziimaa Chimed-Ochir, Nikola Doubková, Chris M. Hoeboer, Emma C. Lathan, Hope Christie**, Anke de Haan**

* Shared first authorship
** Shared last authorship

Corresponding author: Stephanie Haering, email address: s.haering@fu-berlin.de

Supplement 1: Gender-disaggregated information

Research indicates that women and gender minorities are at an increased risk for a broad range of trauma-related mental disorders (Borgogna et al., 2022; Gavranidou & Rosner, 2003; Haering et al., 2022; Leach et al., 2008; Tolin & Foa, 2006; Van de Velde et al., 2010). The results of our multinomial regression analysis were in line with these findings, as women and gender nonbinary participants were more likely to belong to the high versus low and moderate symptom class (see manuscript for detailed analyses and results). One potential reason for this might be that individuals differ in the specific types of potentially traumatic events (PTEs) they experience. For instance, women and gender queer individuals are more likely than men to experience high-impact events such as sexual violence or physical assault (Brewerton et al., 2022; Kessler et al., 1995; Newcomb et al., 2020), which have been found to be associated with a higher probability of developing posttraumatic stress disorder (PTSD) (Breslau et al., 1999). Accordingly, we conducted supplementary analyses on trauma type by gender in our sample.

Due to the multiple answer options of the GPS trauma item, there were no mutually exclusive and distinct trauma categories in the data set, which prevented an overall analysis of trauma type*gender. To accommodate this difficulty, we tested whether women and men differed by self-experienced sexual violence (versus all other trauma types) and self-experienced physical violence (versus all other trauma types).

Differences in trauma type by gender were investigated using X^2-tests. Bonferroni-adjusted *p*-values indicated a significance threshold of $p = .05/3 = .016$ for pairwise comparisons.

Analyses showed that there was differential risk for both sexual violence ($\chi^2(2, N = 8675) = 290.33$, $p < .001$) and physical violence ($\chi^2(2, N = 8675) = 81.04$, $p < .001$) based on gender. Women were more often exposed to sexual violence ($\chi^2(1, N = 8583) = 262.71$, $p < .001$) and physical violence than men ($\chi^2(1, N = 8583) = 59.47$, $p < .001$). Compared to men, nonbinary participants were more often exposed to sexual violence ($\chi^2(1, N = 2169) = 157.79$, $p < .001$) and physical violence ($\chi^2(1, N = 2169) = 42.56$, $p < .001$). Also, nonbinary participants were more likely to experience sexual violence ($\chi^2(1, N = 6598) = 16.04$, $p < .001$) and physical violence than women ($\chi^2(1, N = 6598) = 15.37$, $p < .001$). Of note, cell frequencies for nonbinary participants were much smaller than for women and men, as shown in Supplementary Table S1.1 below.

Table S1.1. Demographics, trauma characteristics, and risk factors by gender

	Men (*n* = 2077)	Women (*n* = 6506)	Nonbinary (*n* = 92)
Demographics			
Age			
Mean (*SD*)	40.0 (14.8)	37.6 (13.8)	29.7 (13.1)
UN Region			
African States	54 (2.6%)	239 (3.7%)	0 (0%)
Asia-Pacific States	483 (23.3%)	1241 (19.1%)	9 (9.8%)
Eastern European States	436 (21.0%)	1122 (17.2%)	17 (18.5%)
Latin American and Caribbean States	234 (11.3%)	722 (11.1%)	0 (0%)
Western European and Other States	650 (31.3%)	1960 (30.1%)	21 (22.8%)
North America	220 (10.6%)	1222 (18.8%)	45 (48.9%)
Trauma characteristics			
Index event happened			
In the past year	1956 (46.5%)	2774 (42.6%)	27 (29.3%)
More than a year ago	1112 (53.5%)	3732 (57.4%)	65 (70.7%)
Multiple experiences of index event			
Yes	619 (29.8%)	2614 (40.2%)	56 (60.9%)
No	1458 (70.2%)	3892 (59.8%)	36 (39.1%)
Index event includes self-experienced sexual violence			
Yes	96 (4.6%)	1277 (19.6%)	34 (37.0%)
No	1981 (95.4%)	5229 (80.4%)	58 (63.0%)
Index event includes self-experienced physical violence			
Yes	287 (13.8%)	1404 (21.6%)	36 (39.1%)
No	1790 (86.2%)	5102 (78.4%)	56 (60.9%)
Risk factors			
Other stressful events			
Yes	1143 (55.0%)	4334 (66.6%)	67 (72.8%)
No	934 (45.0%)	2172 (33.4%)	25 (27.2%)
Lack of social support			
Yes	701 (33.8%)	3000 (46.1%)	48 (52.2%)
No	1376 (66.2%)	3506 (53.9%)	44 (47.8%)

	Men (*n* = 2077)	Women (*n* = 6506)	Nonbinary (*n* = 92)
Childhood trauma			
Yes	863 (41.6%)	3795 (58.3%)	70 (76.1%)
No	1214 (58.4%)	2711 (41.7%)	22 (23.9%)
History of mental illness			
Yes	497 (23.9%)	2711 (41.7%)	74 (80.4%)
No	1580 (76.1%)	3795 (58.3%)	18 (19.6%)
Lack of resilience			
Yes	420 (20.2%)	1369 (21.0%)	35 (38.0%)
No	1657 (79.8%)	5137 (79.0%)	57 (62.0%)

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Supplement 2: Trauma types and stress and trauma-related symptoms across regions

Due to the mutually non-distinct event assessment in the GPS (multiple answers are possible to describe the index event, e.g., participants can indicate that their index event involved both sexual violence and physical violence) a general analysis of trauma type distribution by region was not possible. We therefore decided to focus on three complementing event characteristics to compare across regions: 1) whether the index event involved sexual violence; 2) whether the index event involved multiple experiences of the event; and 3) whether the index event involved life-threat.

In a first step, for each of these three categories, we compared the relative share of events fulfilling the respective criterion across regions. In a second step, we compared transdiagnostic symptom distributions given the same event type across regions. Bonferroni-corrected post-hoc tests were used to compare all possible pairs of regions (i.e., k = 15 comparisons). P values for multiple comparisons were multiplied by 15 to account for the alpha-level adjustment.

Cross-regional differences in event characteristics

Events involving sexual violence

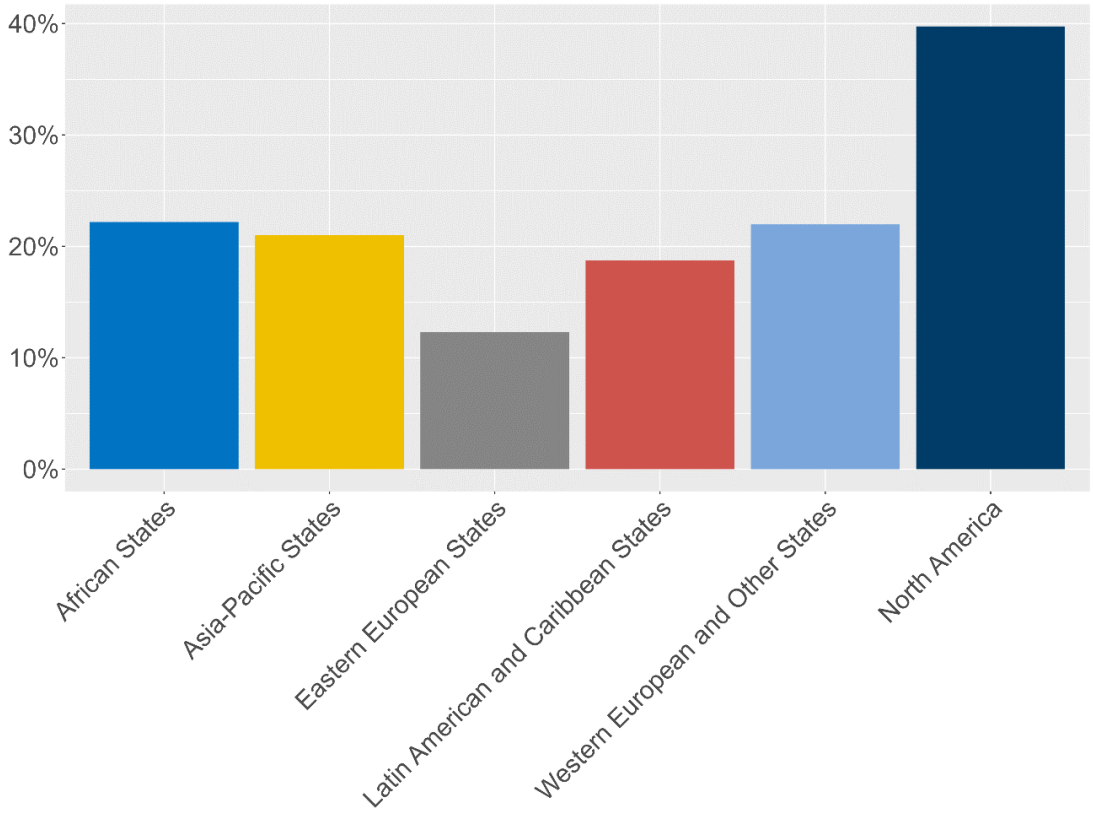

Figure S2.1. Regional shares of events that were reported as involving sexual violence

Table S2.1. Percentage point differences in shares of events involving sexual violence

	Asia-Pacific States (21%)	**Eastern European States (12%)**	**Latin American and Caribbean States (19%)**	**Western European and Other States (22%)**	**North America (40%)**
African States (22%)	1%-point	**10%-points**	3%-points	0%-points	**18%-points**
Asia-Pacific States (21%)		**9%-points**	2%-points	1%-point	**19%-points**
Eastern European States (12%)			**7%-points**	**10%-points**	**28%-points**
Latin American and Caribbean States (19%)				3%-points	**21%-points**
Western European and Other States (22%)					**18%-points**

Note. Bonferroni-adjusted multiple comparisons were used to compare event types among regions. Bolded values indicate a statistically significant difference (Bonferroni-adjusted p<.05).

Events involving multiple experiences of the event

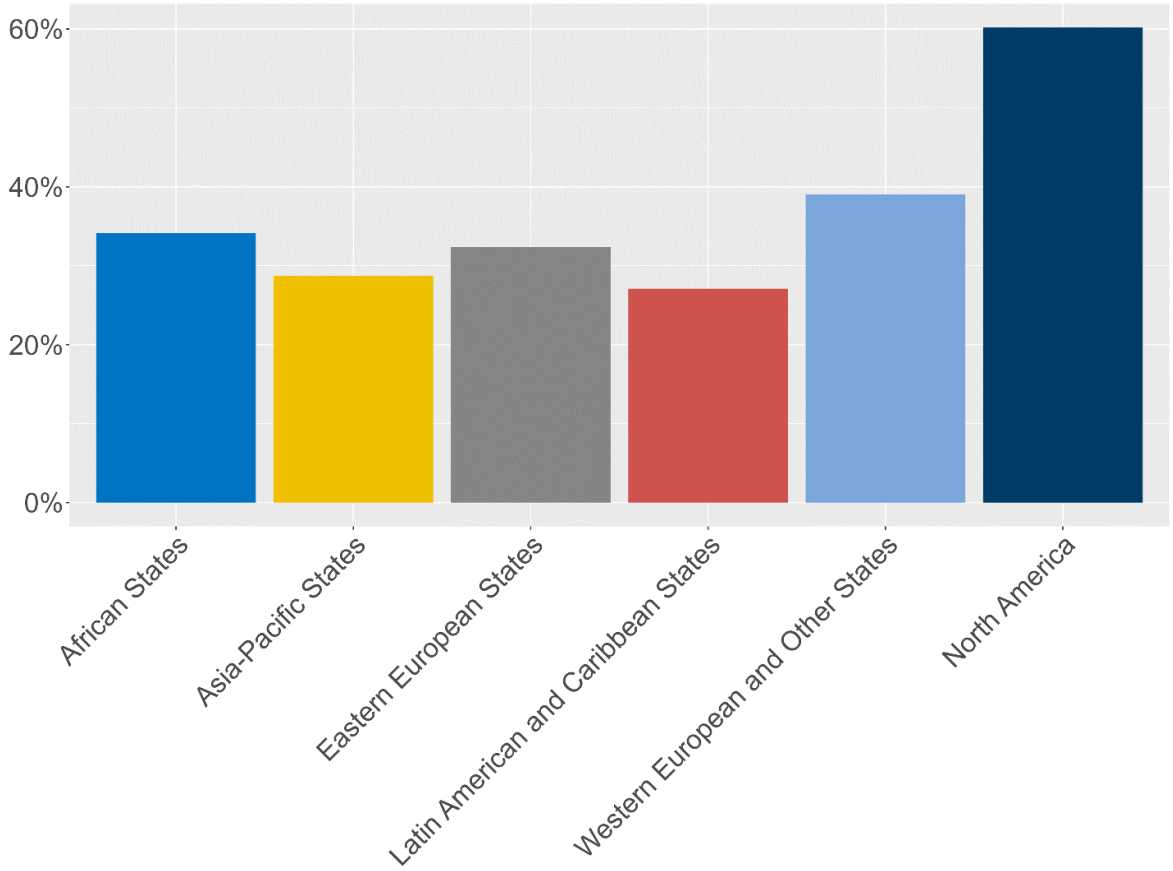

Figure S2.2. Regional shares of events that were reported as involving multiple experiences of the event

Table S2.2. Percentage point differences in shares of events involving multiple experiences of the event

	Asia-Pacific States (29%)	**Eastern European States (32%)**	**Latin American and Caribbean States (27%)**	**Western European and Other States (39%)**	**North America (60%)**
African States (34%)	5%-points	2%-points	7%-points	5%-points	**26%-points**
Asia-Pacific States (29%)		3%-points	2%-points	**10%-points**	**31%-points**
Eastern European States (32%)			5%-points	**7%-points**	**28%-points**
Latin American and Caribbean States (27%)				**12%-points**	**33%-points**
Western European and Other States (39%)					**21%-points**

Note. Bonferroni-adjusted multiple comparisons were used to compare event types among regions. Bolded values indicate a statistically significant difference (Bonferroni-adjusted $p<.05$).

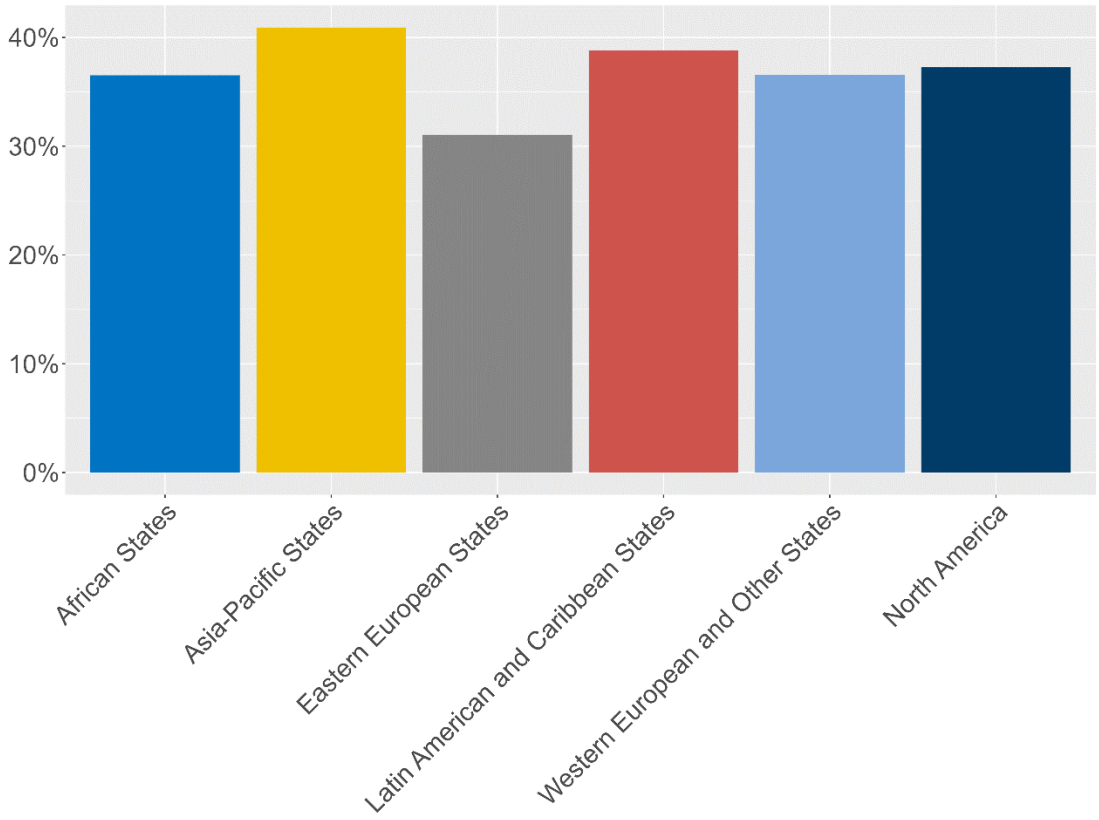

Figure S2.3. Regional shares of events that were reported as involving life threat

Table S2.3. Percentage point differences in shares of events involving life threat

	Asia-Pacific States (41%)	**Eastern European States (31%)**	**Latin American and Caribbean States (39%)**	**Western European and Other States (37%)**	**North America (37%)**
African States (37%)	4%-points	**6%-points**	2%-points	0%-points	0%-points
Asia-Pacific States (41%)		**10%-points**	2%-points	4%-points	4%-points
Eastern European States (31%)			**8%-points**	**6%-points**	**6%-points**
Latin American and Caribbean States (39%)				2%-points	2%-points
Western European and Other States (37%)					0%-points

Note. Bonferroni-adjusted multiple comparisons were used to compare event types among regions. Bolded values indicate a statistically significant difference (Bonferroni-adjusted p<.05).

Cross-regional differences in transdiagnostic symptom distributions

Sexual violence-related symptoms

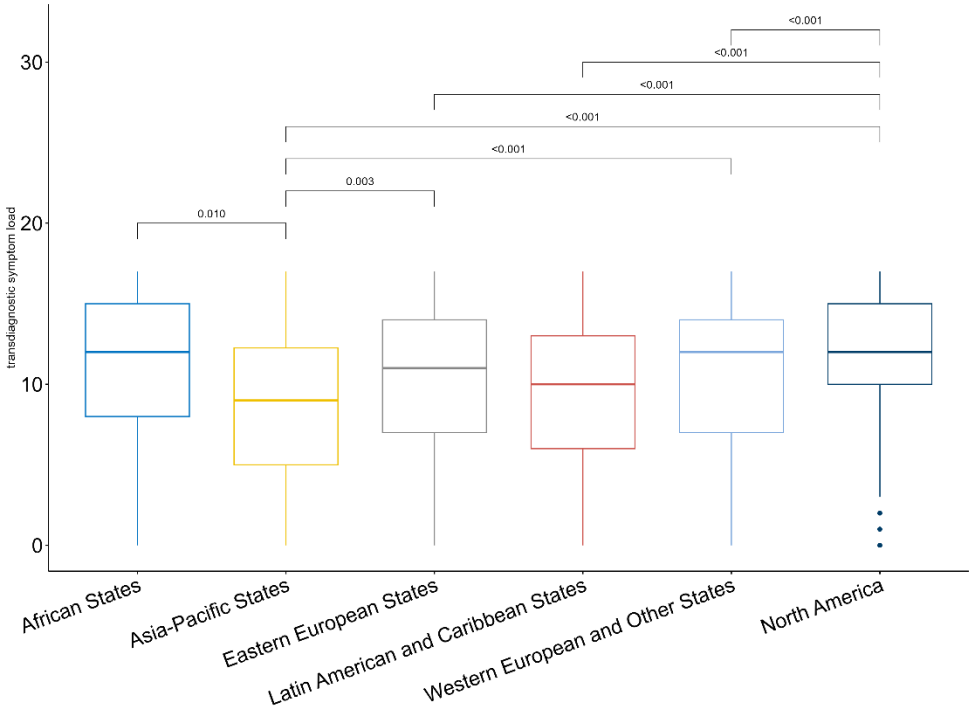

Figure S2.4. Regional differences in sexual violence-related symptoms
Note. Bonferroni-adjusted multiple comparisons were used to compare symptom distributions among regions. Highlighted contrasts indicate a statistically significant difference (Bonferroni-adjusted p<.05).

Table S2.4. Regional differences in sexual violence-related symptoms

contrast	Cohen's *d*	Lower CI	Upper CI
African States - Asia-Pacific States	0.49	0.22	0.75
Asia-Pacific States - Eastern European States	0.34	0.52	0.17
Asia-Pacific States - North America	0.69	0.82	0.56
Asia-Pacific States - Western European and Other States	0.40	0.53	0.27
Eastern European States - North America	0.35	0.51	0.18
Latin American and Caribbean States - North America	0.47	0.64	0.30
Western European and Other States - North America	0.29	0.41	0.18

Note. Effect size differences and 95% Confidence intervals for Bonferroni-corrected statistically significant regional comparisons are depicted

Symptoms related to multiple experiences of the event

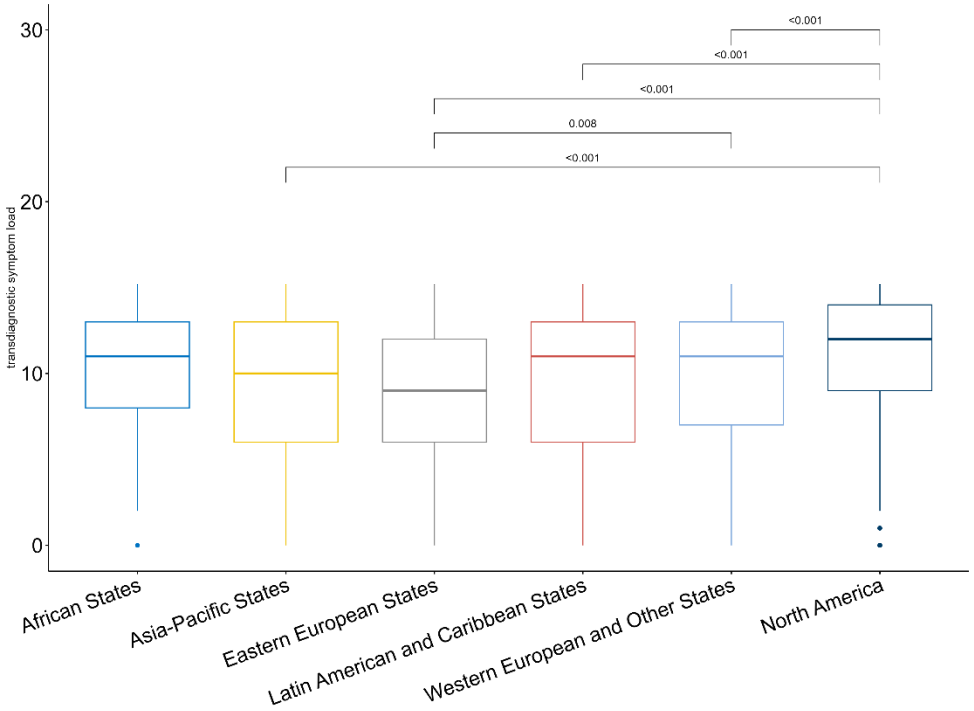

Figure S2.5. Regional differences in symptoms related to multiple experiences of the event
Note. Bonferroni-adjusted multiple comparisons were used to compare symptom distributions among regions. Highlighted contrasts indicate a statistically significant difference (Bonferroni-adjusted p<.05).

Table S2.5. Regional differences in symptoms related to multiple experiences of the event

contrast	Cohen's *d*	Lower CI	Upper CI
Asia-Pacific States - North America	0.47	0.58	0.36
Eastern European States - North America	0.52	0.63	0.41
Eastern European States - Western European and Other States	0.19	0.30	0.08
Latin American and Caribbean States - North America	0.38	0.52	0.24
Western European and Other States - North America	0.33	0.42	0.24

Note. Effect size differences and 95% Confidence intervals for Bonferroni-corrected statistically significant regional comparisons are depicted

Life threat-related symptoms

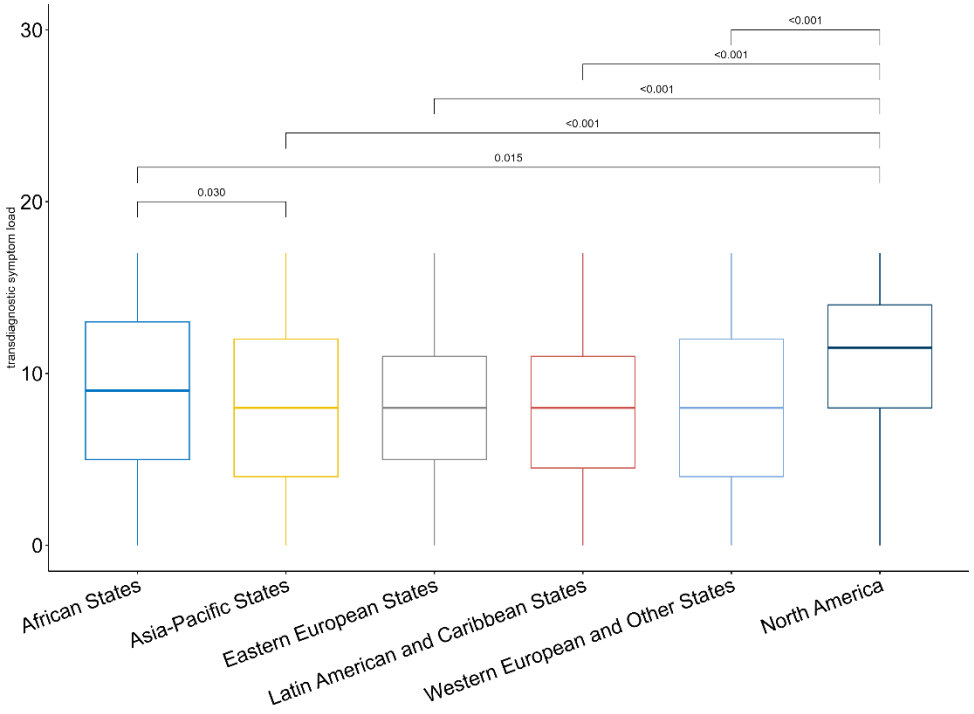

Figure S2.6. Regional differences in life threat-related symptoms
Note. Bonferroni-adjusted multiple comparisons were used to compare symptom distributions among regions. Highlighted contrasts indicate a statistically significant difference (Bonferroni-adjusted p<.05).

Table S2. 6. Regional differences in life threat-related symptoms

contrast	Cohen's *d*	Lower CI	Upper CI
African States - Asia-Pacific States	0.34	0.13	0.54
African States - North America	0.35	0.56	0.14
Asia-Pacific States - North America	0.69	0.80	0.58
Eastern European States - North America	0.61	0.73	0.48
Latin American and Caribbean States - North America	0.62	0.76	0.49
Western European and Other States - North America	0.64	0.75	0.53

Note. Effect size differences and 95% Confidence intervals for Bonferroni-corrected statistically significant regional comparisons are depicted

Supplement 3: Key class characteristics

Table S3.1. Demographics, trauma characteristics, and risk factors of the symptom classes

	Overall (*N*=8675)		High symptoms (*n*=2834)		Moderate symptoms (*n*=3739)		Low symptoms (*n*=2102)		*p*-value
Age									
Mean		38.1		35.6		38.8		40.2	<.001
SD		14.1		13.1		14.2		14.8	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	
Gender									
Men	2077	23.9	456	16.1	853	22.8	768	36.5	<.001
Women	6506	75.0	2317	81.8	2863	76.6	1326	63.1	
Nonbinary	92	1.1	61	2.2	23	0.6	8	0.4	
UN Region									
African States	293	3.4	116	4.1	118	3.2	59	2.8	<.001
Asia-Pacific States	1733	20.0	471	16.6	771	20.6	491	23.4	
Eastern European States	1575	18.2	413	14.6	708	18.9	454	21.6	
Latin American and Caribbean States	956	11.0	280	9.9	470	12.6	206	9.8	
Western European and Other States	2631	30.3	797	28.1	1097	29.3	737	35.1	
North America	1487	17.1	757	26.7	575	15.4	155	7.4	
Index event happened									
In the past year	3766	43.3	1087	38.4	1792	47.9	887	42.2	<.001
More than a year ago	4909	56.6	1747	61.6	1947	52.1	1215	57.8	
Multiple experiences of index event									
Yes	3289	37.9	1683	59.4	1262	33.8	344	16.4	<.001
No	5386	62.1	1151	40.6	2477	66.2	1758	83.6	

	Overall (*N*=8675)		High symptoms (*n*=2834)		Moderate symptoms (*n*=3739)		Low symptoms (*n*=2102)		*p*-value
PTSD A-criterion met									
Yes	6201	71.5	2232	78.8	2600	69.5	1369	65.1	<.001
No	2474	28.5	602	21.2	1139	30.5	733	34.9	
Other stressful events									
Yes	5544	63.9	2414	85.2	2471	66.1	659	31.4	<.001
No	3131	36.1	420	14.8	1268	33.9	1443	68.6	
Lack of social support									
Yes	3749	43.2	1896	66.9	1521	40.7	332	15.8	<.001
No	4926	56.8	938	33.1	2218	59.3	1770	84.2	
Childhood trauma									
Yes	4728	54.5	2084	73.5	1915	51.2	729	34.7	<.001
No	3947	45.5	750	26.5	1824	48.8	1373	65.3	
History of mental illness									
Yes	3282	37.8	1729	61.0	1207	32.3	346	16.5	<.001
No	5393	62.2	1105	39.0	2532	67.7	1756	83.5	
Lack of resilience									
Yes	1824	21.0	756	26.7	667	17.8	401	19.1	<.001
No	6851	79.0	2078	73.3	3072	82.2	1701	80.9	