

Exposure to traumatic events among adolescents in four nations

Ask Elklit, Professor, Clinical Psychologist* & Tóra Petersen, Clinical Psychologist*

Abstract

Background: Although studies indicate that adolescents, like adults, might develop posttraumatic stress disorder after exposure to traumatic events, the research on this age group is still sparse.

Method: In three national representative samples and one national total sample of 1,206 8th and 9th-grade students with a mean age of 14.5 years, the prevalence of 19 potential traumatizing and distressing events were reported, along with the psychological impact of these events.

Findings: Ninety percent of the adolescents had been exposed to at least one event. The most common events were the death of a family member, threat of violence, bullying, near-drowning, and traffic accidents. Gender was associated with specific events. The estimated lifetime prevalence of posttraumatic stress disorder (PTSD) in the total sample was 14.6 percent, whereas another 13 percent reached a subclinical level of PTSD. Following exposure, females suffered from PTSD two and a half times more often than males. The relative risk for PTSD given a specific event is described. Being exposed to multiple traumatic events was associated with an increase in PTSD. Cultural differences were found in prevalence of PTSD, exposure to specific events and in the female male ratio in PTSD.

Conclusion: The findings indicate substantial mental health problems in adolescents that are associated with various types of victimization.

Keywords: cross-national, posttraumatic stress disorder, adolescents, gender, trauma exposure

Introduction

In many cases adolescence is a period of rebellion and experimentation with new behaviours and roles. Though studies indicate that this group, like adults, is vulnerable to the development of posttraumatic stress disorder (PTSD),¹ and that PTSD might entail serious developmental consequences,² most studies, on adolescent exposure to traumatic events are limited by being convenience samples addressing exposure to a single traumatic event or a single cluster of traumatic events, for example violence or abuse.³⁻⁷

The stressor criterion for PTSD according to DSM-IV is defined as an extreme traumatic event involving actual or threatened death, serious injury, or other threat to one's physical integrity.⁸ Joseph and colleagues⁹ underline, however, the importance of examining less severe and more common events as a supplement to highly traumatizing and unusual events in studies of PTSD. Research investigating a broad range of traumatic or negative life events has the potential of estimating the impact of specific events

*) Department of Psychology
University of Aarhus
Denmark
askel@psy.au.dk

knowing the exposure to a larger number of possible events.

Exposure can be direct and indirect, that is witnessing or learning about a traumatic event that has happened for instance to a family member or close friend, and in the DSM-IV⁸, the stressor criterion for PTSD was expanded to include indirect exposure, as clinical experience and research had given evidence that this kind of exposure could result in PTSD.

Studies based on adolescents, young adults and adults have shown differences in the prevalence of PTSD in various countries.⁹⁻¹¹ One explanation to this might be, that there actually are cultural differences. The variation might, however, be due to methodological differences. This is why cross-national studies applying the same methodology are strong assets.

This study

The overall aim of the present paper is to study a broad range of traumatic events and negative life events among adolescents using the same measures in different countries. Four different countries with various challenges for the adolescents were selected: Lithuania as a former Soviet Republic fighting to reach living standards; Denmark, Iceland and The Faroe Islands as Nordic welfare states; Iceland and The Faroe Islands, though, as smaller countries characterised by a rough nature and recurrent natural disasters.

Domainskaite-Gota & Elklit¹² studied a national probability sample of 183 9th grade Lithuanian adolescents ($M= 15.1$ years) and found that 81 percent of the males and 80 percent of the females had been exposed to at least one traumatic event. Most frequent events were threats of physical assault, near-drowning experiences and the death of someone close. Estimated lifetime prevalence

of PTSD in the total sample was 6%; 12% reached a subclinical level of PTSD.

Factors such as female gender, living with a single parent, direct and indirect exposure to traumatic events, number of events, and more recent exposure (<1 year) predicted more posttraumatic symptoms.

In a national probability study Elklit¹³ studied 390 Danish 8th graders age 14-15 and found that 78 percent of the males and 87 percent of the females had been exposed to at least one traumatic event. The estimated lifetime prevalence of PTSD in the total sample was 9.0 percent, whereas another 14.1 percent reached a subclinical level of PTSD. Following exposure, females suffered from PTSD twice as often as males. The most common events were the death of a family member, threat of violence, or serious accidents. The most distressing subjective events were rape, suicide attempts, death in the family, serious illness, and childhood abuse. Gender, parents' education, and living with a single parent were associated with specific events. Being exposed to multiple traumatic events was associated with an increase in PTSD.

In an Icelandic national probability study of 206 9th-grade students with a mean age of 14.5 years,¹⁴ seventy-four percent of the girls and 79 percent of the boys were exposed to at least one traumatic event or life event. The most common events were the death of a family member, threat of violence, and traffic accidents. The most distressing subjective events were childhood neglect, abortion, rape, and serious illness. Gender, mothers' education, and single-parenthood were associated with specific events. The estimated lifetime prevalence of PTSD in the total sample was 16 percent, whereas another 12 percent reached a subclinical level of PTSD.

In a Faroese total-population sample of

eighth-graders (N=687; M=14.2 years),¹⁵ ninety percent of the students reported having directly experienced or having witnessed at least one event (94% of the females and 89% of the males). The most common events were: death of someone close, threats of being beaten, and humiliation or bullying. The most distressing subjective events were: The estimated lifetime prevalence of PTSD in the total sample was 20%, whereas another 14% reached a subclinical level of PTSD.

The aim of the present paper is to bring together the results from the four above mentioned studies to make specific analyses and comparisons of the data to elucidate a) to which degree there are differences between the countries in exposure rates, b) whether there are gender differences in exposure, c) to which degree socio-demographic variables are associated with exposure rates, d) whether there are gender differences in relative risk for PTSD after exposure, and e) to compare traumatization across the four countries.

Method

Study design, procedure, and participants

The data were collected from questionnaire surveys with three national representative probability samples (Denmark, Lithuania, Iceland) and one total population sample (Faroe Island); in total 1,466 students with a mean age of 14.2 years (SD=1.52). The gender distribution was 48% males (n=698) and 51% females (n=747) – fourteen students did not state their gender.

Students in primary public schools constitute a very good representation of the adolescent population, as the schools in the various countries are practically obligatory. In the probability studies, the schools were selected from a list of all schools in the country by permutations. The percentage of

invited schools that participated was about 75%. The primacy of the initials of the head teachers decided which class was chosen, in case there was more than one grade class in the school. The percentage of students present participating approached 100%. Further procedural details are reported in the original research articles.¹²⁻¹⁵

Instruments

The first part of the questionnaire contained questions about gender, age, parents' education, and living arrangements (living with one parent, two parents, or others such as grandparents or within an institution). Parents' education was chosen as a crude measure for the socioeconomic situation. More detailed demographic information was not asked because other studies¹⁶ have shown that adolescents' knowledge of parents' income and occupational status is not very reliable.

In the last part of the questionnaire, the students were asked about their exposure to 19 traumatic events and negative life events (Table 1). Each question could be answered according to direct exposure or indirect exposure (i.e. witnessing an event or a person close to them experiencing an event). The list of events was selected from scientific literature and clinical experience, covering possible life-threatening experiences and distressing family conditions such as neglect, abuse, absence of a parent, and bullying.

The Harvard Trauma Questionnaire Part-IV (HTQ)¹⁷ was used to estimate the occurrence of PTSD at the time of the event. When filling in the HTQ, pupils were asked to pick the event most distressing to them and to keep that in mind when answering. The HTQ contains the 17 PTSD symptoms included in the DSM-IV.⁸ The HTQ Part-IV has been used extensively in the Nordic countries and permits an as-

Table 1. Trauma events and life events according to direct exposure and nation in % (N = 1466).

Event	N	1: Denmark (n=390)	2: Iceland (n=206)	3: Lithuania (n=183)	4: Faeroe Is. (n=687)	F-ratio (Tukey's b)	Gender diff. in exposure F-ratio
1. Traffic accident	264	15.9	27.1	16.9	16.9	4.64 ³ (2>1,3,4)	4.46 ¹
2. Other serious accidents	158	11.5	11.1	5.5	11.9	2.06	0.76
3. Physical assault	108	4.6	7.8	4.4	9.7	3.96 ²	2.80
4. Rape	45	1.8	3.3	1.6	4.2	1.94	2.06
5. Witnessed other people injured or killed	119	9.0	5.8	3.3	9.7	3.22 ¹ (4,1>3)	3.35
6. Came close to being injured or killed	157	10.5	8.7	6	12.6	2.61	11.80 ⁴
7. Threatened to be beaten	433	26.9	27.6	29.7	31.9	1.00	44.81 ⁵
8. Near-drowning	314	18.7	20.9	26.4	21.1	1.44	8.17 ³
9. Attempted suicide	125	6.2	10.2	6.6	10.1	2.04	35.33 ⁵
10. Robbery/theft	214	11.8	18.4	19.8	13.8	3.06 ¹ (3>1)	7.68 ²
11. Pregnancy/abortion	33	1.8	2.5	–	3.1	2.22	3.03
12. Serious illness	161	12.6	4.8	7.7	13.1	4.47 ³ (4,1>2)	0.22
13. Death of someone close	696	51.8	42.7	24.2	53.3	18.13 ⁵ (4,2,1>3)	13.96 ⁵
14. Divorce	227	19.0	20.4	11.5	13.2	4.24 ³ (2>3)	0.10
15. Sexual abuse	57	1.5	3.9	4.4	5.2	2.86 ¹	11.57 ⁴
16. Physical abuse	77	3.6	2.9	3.8	7.4	3.63 ¹	0.80
17. Severe childhood ineglect	54	3.1	2.9	1.1	5.1	2.44	0.06
18. Humiliation or persecu- tion by others (mobbing)	361	22.6	23.3	9.8	30.5	11.53 ⁵ (4,2,1>3)	1.33
19. Absence of a parent	146	7.4	5.8	4.4	14.7	12.36 ⁵ (4>1,2,3)	11.90 ⁴

1) $p < .05$; 2) $p < .01$; 3) $p < .005$; 4) $p < .001$; 5) $p < .0005$

assessment of whether or not a person suffers from PTSD.^{13,18} It is also a measure of the intensity of the three core symptom groups (re-experiencing, avoidance, and hyperarousal) of PTSD. The items are scored on a four-point Likert scale (1 = not present, 4 = very often present). An item score must be ≥ 3 to count as a symptom for a diagnosis. A subclinical level of PTSD is gained if the respondent meets two out of three criteria and misses the last criterion by only one

symptom. The latter does not apply to the intrusion subscale, which must be reached. The subscales are scored separately. The internal consistency in this scale was found to be good: Cronbach's $\alpha = .96$ for the PTSD questions and .78, .81, and .80 for the re-experiencing, avoidance, and hyperarousal subscales, respectively. The inter-item coefficients for the subscales were .46, .38, and .44 respectively, indicating good discriminatory power.¹⁹

Results

Exposure to traumatic events and negative life events

Ninety percent of the adolescents in the four countries reported having directly experienced or having witnessed at least one event, and the five most recorded direct events were (Table 1): death of someone close (47%), threat of being beaten (30%), humiliation or persecution by others/bullying (25%), near-drowning (21%), and traffic accidents (18%). The five least prevalent direct events were (Table 1): physical abuse (5%), sexual abuse (4%), severe childhood neglect (4%), rape (3%), and pregnancy/abortion (2%). The adolescents in the four countries had on average been exposed to 2.6 events.

A gender difference was found in exposure, as the males reported significantly more often of traffic accidents, coming close to being injured or killed, threats of being beaten, and near drowning. Females, on the other hand significantly more often reported attempted suicide, having lost someone close, sexual abuse, and having an absent parent (Table 1).

Cultural differences

The results from a cross-national comparison of exposure based on ANOVA analysis and a post hoc Tukey's-b analysis is presented in Table 1. Three types of accidents or traumatic events not family related (other serious accidents, near-drowning and coming close to being injured or killed), and five family related, interpersonal or intimate traumatic events or negative life events (threatened to be beaten, rape, suicide attempt, pregnancy/abortion, and severe childhood neglect) did not vary significantly among the countries. On the other hand the analysis showed national differences in prevalence of some of the traumatic events and negative life events: The Icelandic adolescents scored relative high

on traffic accidents, divorce, and suicide attempts; and relative low on serious illness. On the other hand Denmark scored relatively low on theft/robbery, sexual abuse, and suicide attempts. The analysis furthermore showed that the Lithuanian adolescents scored relatively high on theft/robbery and having seen others injured; and relatively low on bullying, divorce, death of someone close, physical assault, rape, childhood neglect, and pregnancy/abortion. Finally, the analysis showed that the Faroese adolescents scored relatively high on sexual abuse, physical assault, rape, childhood neglect, physical abuse, humiliation, and parental absence (Table 1).

Sociodemographic factors

Analysis based on data from all four countries showed that gender not was significantly associated with the number of direct events. On the contrary, female gender was associated with more indirect events ($F(1,1444)=11.02, p<.0005$), as females reported 4.2 indirect events compared to males, who had a mean of 3.5. Living with a single parent was also associated with number of direct ($F(1,1435)=60.07, p<.0005$), and indirect events ($F(1,1435)=6.54, p<.05$), as adolescents living with a single parent reported 3.6 direct events, which is significantly more than the 2.3 direct events reported by those adolescents living with both parents. Likewise, adolescents living with a single parent reported significantly more indirect events (4.4) compared to those living with both parents (3.8). There were no significant associations between mothers' or fathers' education and exposure to trauma.

Prevalence and relative risk of PTSD

The prevalence of PTSD across the four nations varied, and comparative analyses revealed that these differences were signifi-

Table 2. Trauma events and life events according to direct exposure and gender (N=1445). Odds ratios for PTSD, logistic regression analyses.

Event	Male		Female	
	Exp (B)	95% c I	Exp (B)	95% c I
1. Traffic accident	1.04	0.51-2.15	1.09	0.65-1.83
2. Other serious accidents	2.55 ¹	1.15-5.66	1.55	0.82-2.94
3. Physical assault	0.88	0.30-2.58	1.44	0.64-3.24
4. Rape	0.45	0.04-5.54	1.05	0.33-3.31
5. Witnessed other people injured or killed	0.38	0.11-1.29	1.18	0.55-2.55
6. Came close to being injured or killed	1.25	0.52-3.00	1.53	0.75-3.09
7. Threatened to be beaten	1.51	0.79-2.89	1.72 ¹	1.07-2.76
8. Near-drowning	1.87	0.95-3.67	0.85	0.51-1.42
9. Attempted suicide	4.61 ¹	1.39-15.33	2.24 ³	1.27-3.93
10. Robbery/theft	1.66	0.80-3.46	0.33 ³	0.16-0.71
11. Pregnancy/abortion			0.46	0.13-1.59
12. Serious illness	1.15	0.48-2.75	0.93	0.50-1.71
13. Death of someone close	0.81	0.43-1.53	1.75 ²	1.16-2.65
14. Divorce	0.59	0.24-1.41	1.25	0.73-2.14
15. Sexual abuse	1.52	0.11-21.16	1.80	0.73-4.41
16. Physical abuse	2.04	0.58-7.19	1.66	0.65-4.23
17. Severe childhood neglect	1.99	0.50-7.91	0.76	0.27-2.14
18. Humiliation or persecution by others (mobbing)	0.89	0.44-1.81	2.89 ⁵	1.90-4.39
19. Absence of a parent	3.89 ³	1.56-9.67	1.64	0.94-2.89

1) $p < .05$; 2) $p < .01$; 3) $p < .005$; 4) $p < .001$; 5) $p < .0005$

cant ($F(1,1444) = 31.57, p < .0005$), as the prevalence of PTSD was significantly lower among the Lithuanian adolescents (6%) compared to adolescents in Denmark (14%) and in Iceland (16%), which again was significant lower than among Faroese adolescents (20%).

The relative risk for developing PTSD after direct exposure was analyzed by logistic regression analysis and is presented in Table 2. The analyses showed that the relative risk for developing PTSD generally was higher after direct exposure compared to indirect exposure in all four countries (data not shown). Being exposed to multiple traumatic events was, likewise, associated with an increased risk of PTSD.

The logistic regression analyses also showed a gender difference in the relative risk of PTSD after exposure to specific traumatic events and negative life events, as fe-

males had a significantly higher relative risk of PTSD after being threatened of assault, death of someone close, and bullied. Males, on the contrary, had a significantly higher relative risk of PTSD after serious accidents, suicide attempts, robbery/theft, and absence of a parent (Table 2).

The results showed that the females from all four countries significantly more often fulfilled the criteria for PTSD compared to the males ($\chi^2 = 106.07; p < .0005$). When the same analyses was made for the countries separately, however, the results revealed a cultural difference, as there was no significant gender difference in PTSD prevalence among the Icelandic adolescents. Among the other three countries, the gender difference was highest among the Lithuanian adolescents (4:1), where eight females versus two males fulfilled the criteria for PTSD ($\chi^2 = 9.07; p < .05$), followed by the Faroese

adolescents (3:1), where 105 females versus 32 males fulfilled the criteria for PTSD ($\chi^2=94.37$; $p<.0005$), and finally the Danish adolescents (2:1) where 19 females versus 11 males fulfilled the criteria for PTSD ($\chi^2=23.28$; $p<.0005$).

Discussion

In line with a community-based study of 427 English adolescents (11-16 years)⁹ where 84% had experienced at least one negative life event, the adolescents from Denmark, Iceland, Lithuania, and The Faroe Islands had experienced a large number of traumatic events and negative life events. In comparison, a longitudinal study of 384 18-year old US adolescents showed that 43% had experienced at least one traumatic event.²⁰ Compared to the present study, this number is low, which might be due to the application of the DMS-III-R stressor criteria²¹ and to the broader list entailing both traumatic events and negative life events applied in the present study. As mentioned in the introduction, Joseph and colleagues⁹ pointed to the importance of also including negative life events when studying PTSD. Studies based on adults,²² show that negative life events might also induce serious posttraumatic symptoms. This is consolidated by the present study, as it showed that negative life events also entail an enhanced risk of PTSD: absence of a parent, which does not include death of a parent, as this was included in a separate category (death of someone close), was found to be the second most distressing event for males. For females, having been bullied, a negative life event, was found to be the event with the highest odds ratio (Table 2).

Werner & Smith²³ found that level of education was supportive in a gender specific way, as the mothers' education had a protective effect for sons, and fathers' education had the same effect for girls. This was,

however, not supported by the data from the four present nations.

In accordance with previous studies²⁴ the relative risk for PTSD after direct exposure was generally higher compared to indirect exposure in all four countries, and the "dose-response" relationship was confirmed. Furthermore, having been exposed to multiple traumatic events was associated with an increase in PTSD. However, not all studies confirm the "dose-response" relationship. In a study of a shooting at the University of Aarhus, Elklit²⁵ found that those who were outside of the centre of the catastrophe had more acute psychological sequelae than those who had been at the centre. Similarly, Elklit,²⁶ studying the aftermath of a shipyard explosion, found that the degree of traumatization after six months was higher in the group who had had an "audience position" compared to the group directly hit by the explosion. Being in the second line of exposure, learning about killing or death and having experienced an uncertainty about ones own fate for some time can presumably sometimes result in more severe acute or long-term stress reactions than is the case of first line exposed subjects. Another explanation might also be that the reason whether the dose-response relationship is confirmed or not is to be found in trauma type or various personal variables.

According to the results presented in Table 2 exposure to some traumatic events (for example severe childhood neglect for females) did not entail an enhanced risk of PTSD. These counter intuitive findings could be explained by the phenomenon of latent class structures.²⁷ Shevlin and Elklit found a clustering of many (7-8) traumatic events and negative life events in a small percentage (2-3%) of the participants. This means that this group of participants has to pick one event for filling out the HTQ,

and that this event not necessarily is the most traumatizing, but for instance the most recent, the most socially acceptable. This individual selection might accordingly be conceived as a defence or a social bias.

Cultural differences

The present study revealed cultural differences both in prevalence of PTSD and in exposure to traumatic events and negative life events; differences that not can be explained by methodological variation. The degree of collectivistic culture versus an individualistic culture may explain some of the differences seen between the four nations. There is evidence that these factors impact adolescents' judgement of life satisfaction, as adolescents in individualistic cultures report higher life satisfaction, which according to some studies serve as a buffer against the impact of stressful events.²⁸ Furthermore the rough climate and living conditions in the Faroe Islands and Iceland may play a part.

Gender differences

It has been suggested¹³ that females seem to be victimized more often in family-related events and by self-inflicted events (suicide attempts), whereas males more often seem to be victimized in activities outside of the family. This is in line with the present results. Furthermore the females in accordance with previous findings²⁹ were more traumatized compared to males. Interesting, though, was the cultural difference in the female-male ratio in PTSD. Female vulnerability can be explained through social roles (model learning), and by gender differences in sensitivity and relatedness. One might claim that Lithuania and the Faroe Islands are countries characterized by traditional gender roles, which has an influence on the high degree of traumatization among females compared to males.

Conclusion

There is increasing evidence that potentially traumatic events are as much a part of adolescence as they are part of adulthood. There were relatively few gender differences in exposure to traumatic events. Gender difference, however, did exist in the relative risks of PTSD after various traumatic events and negative life events, and overall, females were found to be at least twice as vulnerable. One should therefore distinguish between risk of exposure and risk of PTSD. Vulnerability was also connected to single parenthood due to perhaps to a lack of parental supervision and stable role models, and/or to parental conflict. The endorsement of events was not randomly distributed, as for example severe forms of abuse and neglect were found to be strongly associated.

Limitations and strengths

The study has a number of limitations. It is based on students' self-reports that could have produced a response bias. However, it is likely that the use of the event list may be an advantage because it promotes recognition rather than recall, which is less distressing in the report of emotionally stressful events.³⁰ Negative affectivity might function as a confounder influencing reporting, but the fact that the subjects are adolescents might produce less of a memory bias, as some events are more recent compared to similar studies of adult subjects. The anonymity of the classroom could for some have made reporting easier compared to an interview. Although the event questionnaire has not been validated, it seems to function well across European cultures.¹³ Finally, because of the design of the study there was no way of reporting whether an event had occurred more than once, hence a distinction between the effect of a single event trauma and repetitive

traumas could not be made. The threshold for counting PTSD symptoms is high compared to other measures (for example PSS)³¹ and Kubany and colleagues³² found very good concordance between interview data and questionnaire data when asking about trauma events. The study is based on national representative populations and a total population sample with very high response rate, which strengthens the results and increases the generalisability.

Clinical implications

As adolescence is a risk period with a considerable exposure to stressful events and 6-20% in the national populations at one point in their lives suffer from PTSD, it is important that mental health professionals learn to identify adolescents at risk and offer intervention where needed.

A standard procedure should be developed for obtaining information about stressful events from adolescents as part of the assessment and planning of interventions. Such routine procedures may result in a broader and more effective intervention program for this age group.

References

1. Caffo E, Forresi B, Livers LS. Impact, psychological sequelae and management of trauma affecting children and adolescents. *Curr Opin Psychiatry* 2005;18:422-8.
2. Pynoos RS, Steinberg AM, Goenjian A. Traumatic stress in childhood and adolescence: recent developments and current controversies. In: van der Kolk BA, McFarlane AC, Weisaeth L, eds. *Traumatic stress – the effects of overwhelming experiences on mind, body and society*. New York: Guilford Press, 2006.
3. Boney-McCoy S, Finkelhor D. Psychosocial sequelae of violent victimization in a national youth sample. *J Consult Clin Psychol* 1995;63:726-36.
4. Edgardh K, Ormstad K. Prevalence and characteristics of sexual abuse in a national sample of Swedish seventeen-year-old boys and girls. *Acta Paediatr* 2000;88:310-9.
5. Khamis V. Post-traumatic stress disorder among school age Palestinian children. *Child Abuse Negl* 2005;29:81-95.
6. Evans LG, Oehler-Stinnett J. Structure and prevalence of PTSD symptomology in children who have experienced a severe tornado. *Psychol Sch* 2006;43:283-95.
7. Broberg AG, Dyregrov A, Lilled L. The Göteborg discotheque fire: posttraumatic stress, and school adjustment as reported by the primary victims 18 months later. *J Child Psychol Psychiatry* 2005;46:1279-86.
8. *Diagnostic and statistical manual of mental disorders. DSM-IV*. Washington DC: American Psychiatric Association, 1994.
9. Joseph S, Mynard H, Mayall M. Life-events and post-traumatic stress in a sample of English adolescents. *J Community Appl Soc Psychol* 2000;10:475-82.
10. Kessler RC, Sonnega A, Bromet E, Hughes M. Posttraumatic stress disorder in the national comorbidity survey. *Arch Gen Psychiatry* 1995;52:1048-60.
11. Perkonig A, Kessler RC, Storz S, Wittchen HU. Traumatic events and post-traumatic stress disorder in the community: prevalence, risk factors and comorbidity. *Acta Psychiatr Scand* 2000;101:46-59.
12. Domainskaite-Gota V, Elklit A. Victimization and PTSD in a Lithuanian national youth probability sample. (Submitted).
13. Elklit A. Victimization and PTSD in a Danish national youth probability sample. *J Am Acad Child Adolesc Psychiatry* 2002;41:174-81.
14. Bödvarsdóttir Í, Elklit A. Victimization and PTSD-like states in an Icelandic youth probability sample. *BMC Psychiatry* 2007;7(51):1-26.
15. Petersen T, Elklit A, Olesen J. Victimization and PTSD in a Faroese youth total population sample. (Submitted).
16. Balvig F. *Risikoungdom. Ungdomsundersøgelse 1999*. Copenhagen: Det Kriminalpræventive Råd, 1999.
17. Mollica RF, Caspi-Yavin Y, Bollini P, Truong T. The Harvard Trauma Questionnaire: validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *J Nerv Ment Dis* 1992;180:111-6.
18. Bach ME. En empirisk belysning og analyse af "emotional numbing" som eventuel selvstændig faktor i PTSD. [An empirical description and analyse of "emotional numbing", as a potential independent factor in PTSD]. *Psykologisk Studiefkriftserie* 2003;6(1):1-132.

19. Briggs RS, Cheek JM. The role of factor analysis in the development and evaluation of personality scales. *J Pers* 1986;54:106-48.
20. Giaconia RM, Reinherz HZ, Silverman AB, Pakiz B. Traumas and posttraumatic stress disorder in a community population of older adolescents. *J Am Acad Child Adolesc Psychiatry* 1995;34:1369-80.
21. Diagnostic and statistical manual of mental disorders. DSM-III-R. Washington DC: American Psychiatric Association, 1987.
22. Brewin CR. Posttraumatic stress disorder: Malady or myth? New Haven, Conn.: Yale University Press, 2003.
23. Werner EE, Smith RS. Vulnerable but invincible. A longitudinal study of resilient children and youth. New York: McGraw-Hill, 1982.
24. Elklit A, Molin K. De psykosociale følger af fyrværkerikatastrofen i Seest. Del 1: Beboerne 3 måneder efter. *Psykologisk Skriftserie* 2006;27(2):1-142.
25. Elklit A. Skuddramaet på Aarhus Universitet. En analyse af de psykologiske efterreaktioner og mestringsstrategier. *Psykologisk Skriftserie* 1994;19(3):1-74.
26. Elklit A. The aftermath of an industrial disaster. *Acta Psychiatr Scand Suppl* 1997;96 (Suppl. 392):1-25.
27. Shevlin M, Elklit A. A latent class analysis of adolescent adverse life events based on a Danish national youth probability sample. *Nord J Psychiatry* 2008. (In press).
28. Park N, Huebner, ES. A cross-cultural study of the levels and correlates of life satisfaction among adolescents. *J Cross Cult Psychol* 2005;36:444-56.
29. McLain SL, Morland LA, Shapiro JA, Foy WD. Etiological factors in posttraumatic stress disorder in children: Comparing child abuse to other trauma types. *Family Violence and Sexual Assault Bulletin* 1998;14:27-30.
30. Willis GB, Gonzalez A. Methodological issues in the use of survey questionnaires to assess the health effects of torture. *J Nerv Ment Dis* 1998;186:283-9.
31. Foa EB, Riggs DS, Dancu CV, Rothbaum BO. Reliability and validity of a brief instrument for assessing posttraumatic stress disorder. *J Trauma Stress* 1993;6:459-73.
32. Kubany ES, Leisen MB, Kaplan AS, Watson S, Haynes SN, Owens JA et al. *Psychol Assess* 2000;12:210-24.