

August 2015 Medline Topic Alert

Aakvaag, H. F., S. Thoresen, et al. (2014). "Shame and guilt in the aftermath of terror: the Utoya Island study." *J Trauma Stress* 27(5): 618-621.

In recent years, there has been increased interest in trauma-related shame and guilt and their relationship to mental health. Little is known, however, about shame and guilt following mass traumas, such as terrorism. This study investigates the potential associations of trauma-related shame and guilt with posttraumatic stress (PTS) reactions after the terrorist attack of July 22, 2011 on Utoya Island in Norway. Interviews were conducted with 325 of the 490 survivors 4 to 5 months after the event. Multiple linear regression analyses were employed to investigate associations. In the month previous to the interview, 44.1% (n = 143) of participants had experienced at least some guilt for what happened during the attack, and 30.5% (n = 99) had experienced at least some shame. Shame and guilt were both uniquely associated with PTS reactions after adjusting for terror exposure, gender, and other potential confounders (frequent shame: B = 0.54, frequent guilt: B = 0.33). We concluded that trauma-related shame and guilt are related to mental health after mass trauma.

Amone-P'Olak, K., P. Jones, et al. (2014). "War experiences, general functioning and barriers to care among former child soldiers in Northern Uganda: the WAYS study." *J Public Health (Oxf)* 36(4): 568-576.

BACKGROUND: Exposure to war is associated with considerable risks for long-term mental health problems (MHP) and poor functioning. Yet little is known about functioning and mental health service (MHS) use among former child soldiers (FCS). We assessed whether different categories of war experiences predict functioning and perceived need for, sources of and barriers to MHS among FCS. **METHODS:** Data were drawn from an on-going War-affected Youths (WAYS) cohort study of FCS in Uganda. Participants completed questionnaires about war experiences, functioning and perceived need for, sources of and barriers to MHS. Regression analyses and parametric tests were used to assess between-group differences. **RESULTS:** Deaths, material losses, threat to loved ones and sexual abuse significantly predicted poor functioning. FCS who received MHS function better than those who did not. Females reported more emotional and behavioural problems and needed MHS more than males. FCS who function poorly indicated more barriers to MHS than those who function well. Stigma, fear of family break-up and lack of health workers were identified as barriers to MHS. **CONCLUSIONS:** Various war experiences affect functioning differently. A significant need for MHS exists amidst barriers to MHS. Nevertheless, FCS are interested in receiving MHS and believe it would benefit them.

Asselmann, E., H. U. Wittchen, et al. (2015). "The role of behavioral inhibition and parenting for an unfavorable emotional trauma response and PTSD." *Acta Psychiatr Scand* 131(4): 279-289.

OBJECTIVE: The role of behavioral inhibition (BI) and parenting for an unfavorable emotional trauma response (DSM-IV criterion A2) and post-traumatic stress disorder (PTSD) development is unclear. **METHOD:** A community sample of adolescents and young adults (aged 14-24) was followed up over 10 years (N=2378). Traumatic events, criterion A2, and PTSD (according to DSM-IV-TR) were assessed using the M-CIDI. BI and parenting were assessed using the Retrospective Self-Report of Inhibition and the Questionnaire of Recalled Parenting Rearing Behavior. Multiple logistic regressions adjusted for sex, age, and number of traumata were used to examine associations of BI as well as maternal and paternal overprotection, rejection, and reduced emotional warmth with (i) criterion A2 in those with trauma (N=1794) and (ii) subsequent PTSD in those with criterion A2 (N=1160). **RESULTS:** Behavioral inhibition (BI; odds ratio, OR=1.32) and paternal overprotection (OR=1.27) predicted criterion A2 in those with trauma, while only BI (OR=1.53) predicted subsequent PTSD. BI and paternal emotional warmth interacted on subsequent PTSD (OR=1.32), that is, BI only predicted PTSD in those with low paternal emotional warmth. **CONCLUSION:** Our findings suggest that BI and adverse parenting increase the risk of an unfavorable emotional trauma response and subsequent PTSD. Paternal emotional warmth buffers the association between BI and PTSD development.

Bender, K., K. Ferguson, et al. (2014). "Mental health correlates of victimization classes among homeless youth." *Child Abuse Negl* 38(10): 1628-1635.

Literature reports high rates of street victimization among homeless youth and recognizes psychiatric symptoms associated with such victimization. Few studies have investigated the existence of victimization classes that differ in type and frequency of victimization and how youth in such classes differ in psychiatric profiles. We used latent class analysis (LCA) to examine whether classes of homeless youth, based on both type and frequency of victimization experiences, differ in rates of meeting diagnostic criteria for major depressive episodes and posttraumatic stress disorder (PTSD) in a sample of homeless youth (N=601) from three regions of the United States. Results suggest youth who experience high levels of direct and indirect victimization (high-victimization class) share similarly high rates of depressive episodes and PTSD as youth who experience primarily indirect victimization only (witness class). Rates of meeting criteria for depressive episodes and PTSD were nearly two and three times greater, respectively, among the high victimization and witness classes compared to youth who never or rarely experienced victimization. Findings suggest the need for screening and intervention for homeless youth who report direct and indirect victimization and youth who report indirect victimization only, while prevention efforts may be more relevant for youth who report limited victimization experience.

Boroughs, M. S., S. E. Valentine, et al. (2015). "Complexity of Childhood Sexual Abuse: Predictors of Current Post-Traumatic Stress Disorder, Mood Disorders, Substance Use, and Sexual Risk Behavior Among Adult Men Who Have Sex with Men." *Arch Sex Behav*.

Men who have sex with men (MSM) are the group most at risk for HIV and represent the majority of new infections in the United States. Rates of childhood sexual abuse (CSA) among MSM

have been estimated as high as 46 %. CSA is associated with increased risk of HIV and greater likelihood of HIV sexual risk behavior. The purpose of this study was to identify the relationships between CSA complexity indicators and mental health, substance use, sexually transmitted infections, and HIV sexual risk among MSM. MSM with CSA histories (n = 162) who were screened for an HIV prevention efficacy trial completed comprehensive psychosocial assessments. Five indicators of complex CSA experiences were created: CSA by family member, CSA with penetration, CSA with physical injury, CSA with intense fear, and first CSA in adolescence. Adjusted regression models were used to identify relationships between CSA complexity and outcomes. Participants reporting CSA by family member were at 2.6 odds of current alcohol use disorder (OR 2.64: CI 1.24-5.63), two times higher odds of substance use disorder (OR 2.1: CI 1.02-2.36), and 2.7 times higher odds of reporting an STI in the past year (OR 2.7: CI 1.04-7.1). CSA with penetration was associated with increased likelihood of current PTSD (OR 3.17: CI 1.56-6.43), recent HIV sexual risk behavior (OR 2.7: CI 1.16-6.36), and a greater number of casual sexual partners (p = 0.02). Both CSA with Physical Injury (OR 4.05: CI 1.9-8.7) and CSA with Intense Fear (OR 5.16: CI 2.5-10.7) were related to increased odds for current PTSD. First CSA in adolescence was related to increased odds of major depressive disorder. These findings suggest that CSA, with one or more complexities, creates patterns of vulnerabilities for MSM, including post-traumatic stress disorder, substance use, and sexual risk taking, and suggests the need for detailed assessment of CSA and the development of integrated HIV prevention programs that address mental health and substance use comorbidities.

Bucker, J., G. R. Fries, et al. (2015). "Brain-derived neurotrophic factor and inflammatory markers in school-aged children with early trauma." *Acta Psychiatr Scand* 131(5): 360-368.

OBJECTIVE: The impact of childhood trauma (CT) on brain-derived neurotrophic factor (BDNF) and cytokines levels remains unclear. We investigated the association between CT and changes in BDNF and cytokines plasma levels in children. **METHOD:** We recruited 36 children with trauma (CT+) and 26 children without trauma (CT-). The presence of CT was based on a clinical interview and by Criteria A of DSM-IV criteria for PTSD. Blood samples were drawn from all children to assess BDNF and cytokines. ANCOVA was performed with psychiatric symptoms and BMI as covariates to evaluate group differences in plasma levels. **RESULTS:** CT+ showed increased levels of BDNF and TNF-alpha after excluding children with history of inflammatory disease (P<0.05) when compared with those CT-. IL-12p70, IL-6, IL-8, IL-10, and IL-1beta levels were not statistically different between groups. **CONCLUSION:** CT+ showed increased BDNF and proinflammatory cytokines levels. The increase in BDNF levels may be an attempt to neutralize the negative effects of CT, while an increase in TNF-alpha levels be associated with a proinflammatory state after CT. How these changes associated with trauma relate to other biological changes and illness trajectory later in life remain to be further studied.

Carmassi, C., L. Dell'Osso, et al. (2014). "Frequency of trauma exposure and Post-Traumatic Stress Disorder in Italy: analysis from the World Mental Health Survey Initiative." *J Psychiatr Res* 59: 77-84.

Epidemiological studies have examined the relative importance of Traumatic Events (TEs) in accounting for the societal burden of post-traumatic stress disorder (PTSD). However, most studies

used the worst trauma experienced, which can lead to an overestimation of the conditional risk of PTSD. Although a number of epidemiological surveys on PTSD have been carried out in the United States, only a few studies in limited sample have been conducted in Italy. This study, carried out in the framework of the World Mental Health Survey Initiative, is a cross-sectional household survey of a representative sample of the Italian adult population. Lifetime prevalence of TEs and 12-month prevalence of PTSD were evaluated using the Composite International Diagnostic Interview (CIDI). Reports of PTSD associated with randomly selected TEs were weighted by the individual-level probabilities of TE selection to generate estimates of population-level PTSD risk associated with each TE. Network events was the most commonly reported class of TEs (29.4%). War events had the highest conditional risk of PTSD (12.2%). The TEs that contributed most to societal PTSD burden were unexpected death of a loved one (24.1%) and having seen atrocities (18.2%). Being female was related to high risk of PTSD after experiencing a TE. Exposure to network events is commonly reported among Italian adults, but two TEs are responsible for the highest burden associated with PTSD: the unexpected death of someone close and sexual assault. These results can help designing public health interventions to reduce the societal PTSD burden.

Choi, J. Y., Y. M. Choi, et al. (2015). "The effects of childhood abuse on self-reported psychotic symptoms in severe mental illness: Mediating effects of posttraumatic stress symptoms." *Psychiatry Res.*

The present study examined the role of posttraumatic stress symptoms in the relationship between childhood abuse and self-reported psychotic symptoms in severe mental illness. A total of 126 patients diagnosed with major psychiatric conditions with comorbid symptoms of psychosis participated in the present study. The representative psychiatric diagnoses included schizophrenia, bipolar disorder with psychotic features, major depressive disorder with psychotic features, schizoaffective disorder, schizophreniform disorder, and delusional disorder. The Korean Child Trauma Questionnaire measured the type and degree of childhood abuse including emotional, physical, and sexual abuse. Korean version of the Impact of Event Scale-Revised assessed posttraumatic stress symptoms, and PSYC subscale of the PSY-5 Factor Scale of the MMPI-2 was used as a measure of self-reported psychotic symptoms. There was a significant relationship between childhood physical, emotional, sexual abuse and psychotic symptoms. Posttraumatic stress symptoms partially mediated the relationship between childhood abuse and psychotic symptoms. This implies that childhood abuse is significantly associated with the experience of chronic posttraumatic stress symptoms, and that such symptoms in turn increases the likelihood of experiencing psychotic symptoms. The results highlight the need for appropriate assessment and intervention concerning childhood abuse and posttraumatic stress symptoms in severe mental illness.

Cohn, A., B. T. Hagman, et al. (2014). "Does negative affect mediate the relationship between daily PTSD symptoms and daily alcohol involvement in female rape victims? Evidence from 14 days of interactive voice response assessment." *Psychol Addict Behav* 28(1): 114-126.

The negative reinforcement model of addiction posits that individuals may use alcohol to reduce negative affective (NA) distress. The current study investigated the mediating effect of daily NA on the relationship between daily PTSD symptoms and same-day and next-day alcohol involvement (consumption and desire to drink) in a sample of 54 non-treatment-seeking female rape victims who completed 14 days of interactive voice response assessment. The moderating effect of lifetime alcohol use disorder diagnosis (AUD) on daily relationships was also examined. Multilevel models suggested that NA mediated the relationship between PTSD and same-day, but not next-day alcohol involvement. NA was greater on days characterized by more severe PTSD symptoms, and alcohol consumption and desire to drink were greater on days characterized by higher NA. Furthermore, daily PTSD symptoms and NA were more strongly associated with same-day (but not next-day) alcohol consumption and desire to drink for women with an AUD than without. Results suggest that NA plays an important role in female rape victims' daily alcohol use. Differences between women with and without an AUD indicate the need for treatment matching to subtypes of female rape victims.

Delker, B. C. and J. J. Freyd (2014). "From betrayal to the bottle: investigating possible pathways from trauma to problematic substance use." *J Trauma Stress* 27(5): 576-584.

Research in both community and clinical settings has found that exposure to cumulative interpersonal trauma predicts substance use problems. Less is known about betrayal as a dimension of trauma exposure that predicts substance use, and about the behavioral and psychological pathways that explain the relation between trauma and substance use. In a sample of 362 young adults, this study evaluated three intervening pathways between betrayal trauma exposure prior to age 18 years and problematic substance use: (a) substance use to cope with negative affect, (b) difficulty discerning and/or heeding risk, and (c) self-destructiveness. In addition, exposure to trauma low in betrayal (e.g., earthquake) was included in the model. Bootstrap tests of indirect effects revealed that betrayal trauma prior to age 18 years was associated with problematic substance use via posttraumatic stress and two intervening pathways: difficulty discerning/heeding risk ($\beta = .07$, $p < .001$), and self-destructiveness ($\beta = .12$, $p < .001$). Exposure to lower betrayal trauma was not associated with posttraumatic stress or problematic substance use. Results contribute to a trauma-informed understanding of substance use that persists despite potentially harmful consequences.

Edwards, K. M., C. M. Dardis, et al. (2015). "Informal social reactions to college women's disclosure of intimate partner violence: associations with psychological and relational variables." *J Interpers Violence* 30(1): 25-44.

This researchers assessed informal (e.g., friends, family) social reactions to college women's (N = 139) disclosure of intimate partner violence (IPV) within their current romantic relationships and associated psychological (i.e., posttraumatic stress symptoms [PTSS] and global psychological distress symptoms) and relational (i.e., intentions to leave the abusive relationship) variables. Women completed confidential surveys, which assessed current partner abuse, psychological and relational variables, and three types of social reactions from informal supports to disclosure of IPV: positive (e.g., believing, validating the victim), negative (e.g., disbelieving, blaming the victim), and

leaving (i.e., being told to end the relationship) reactions. At the bivariate level, negative social reactions to women's disclosure were related to increases in global psychological distress, PTSS, and leaving intentions; positive social reactions to disclosure related only to increases in PTSS; and being told to leave the relationship related to increases in PTSS and leaving intentions. In the regression analyses, after controlling for abuse severity, negative social reactions were significantly related to global psychological distress and PTSS, and being told to leave significantly related to leaving intentions and PTSS. Mechanisms for these relationships and implications are discussed.

Ehring, T., R. Welboren, et al. (2014). "Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse." *Clin Psychol Rev* 34(8): 645-657.

Posttraumatic stress disorder (PTSD) is highly prevalent in adult survivors of childhood sexual and/or physical abuse. However, intervention studies focusing on this group of patients are underrepresented in earlier meta-analyses on the efficacy of PTSD treatments. The current meta-analysis exclusively focused on studies evaluating the efficacy of psychological interventions for PTSD in adult survivors of childhood abuse. Sixteen randomized controlled trials meeting inclusion criteria could be identified that were subdivided into trauma-focused cognitive behavior therapy (CBT), non-trauma-focused CBT, eye movement desensitization and reprocessing, and other treatments (interpersonal, emotion-focused). Results showed that psychological interventions are efficacious for PTSD in adult survivors of childhood abuse, with an aggregated uncontrolled effect size of $g=1.24$ (pre- vs. post-treatment), and aggregated controlled effect sizes of $g=0.72$ (post-treatment, comparison to waitlist control conditions) and $g=0.50$ (post-treatment, comparison with TAU/placebo control conditions), respectively. Effect sizes remained stable at follow-up. As the heterogeneity between studies was large, we examined the influence of two a priori specified moderator variables on treatment efficacy. Results showed that trauma-focused treatments were more efficacious than non-trauma-focused interventions, and that treatments including individual sessions yielded larger effect sizes than pure group treatments. As a whole, the findings are in line with earlier meta-analyses showing that the best effects can be achieved with individual trauma-focused treatments.

Eshel, Y., H. Majdoob, et al. (2014). "Posttraumatic recovery to distress symptoms ratio: a mediator of the links between gender, exposure to fire, economic condition, and three indices of resilience to fire disaster." *Community Ment Health J* 50(8): 997-1003.

This study investigated the direct and indirect effects of demographic predictors on level of resilience following a potentially traumatic event. We hypothesized that the direct effects of three variables (exposure to fire hazards, gender, and economic condition) on resilience following a fire disaster would be mediated by the proportion of posttraumatic recovery to post-fire distress symptoms. The sample consisted of 234 Israeli Druze youth whose hometown was endangered and damaged by the Mount Carmel fire disaster in December 2010. Results partially supported the research hypotheses.

Galatzer-Levy, I. R., K. I. Karstoft, et al. (2014). "Quantitative forecasting of PTSD from early trauma responses: a Machine Learning application." *J Psychiatr Res* 59: 68-76.

There is broad interest in predicting the clinical course of mental disorders from early, multimodal clinical and biological information. Current computational models, however, constitute a significant barrier to realizing this goal. The early identification of trauma survivors at risk of post-traumatic stress disorder (PTSD) is plausible given the disorder's salient onset and the abundance of putative biological and clinical risk indicators. This work evaluates the ability of Machine Learning (ML) forecasting approaches to identify and integrate a panel of unique predictive characteristics and determine their accuracy in forecasting non-remitting PTSD from information collected within 10 days of a traumatic event. Data on event characteristics, emergency department observations, and early symptoms were collected in 957 trauma survivors, followed for fifteen months. An ML feature selection algorithm identified a set of predictors that rendered all others redundant. Support Vector Machines (SVMs) as well as other ML classification algorithms were used to evaluate the forecasting accuracy of i) ML selected features, ii) all available features without selection, and iii) Acute Stress Disorder (ASD) symptoms alone. SVM also compared the prediction of a) PTSD diagnostic status at 15 months to b) posterior probability of membership in an empirically derived non-remitting PTSD symptom trajectory. Results are expressed as mean Area Under Receiver Operating Characteristics Curve (AUC). The feature selection algorithm identified 16 predictors, present in $\geq 95\%$ cross-validation trials. The accuracy of predicting non-remitting PTSD from that set (AUC = .77) did not differ from predicting from all available information (AUC = .78). Predicting from ASD symptoms was not better than chance (AUC = .60). The prediction of PTSD status was less accurate than that of membership in a non-remitting trajectory (AUC = .71). ML methods may fill a critical gap in forecasting PTSD. The ability to identify and integrate unique risk indicators makes this a promising approach for developing algorithms that infer probabilistic risk of chronic posttraumatic stress psychopathology based on complex sources of biological, psychological, and social information.

Gittins, C. B., H. M. Paterson, et al. (2015). "How does immediate recall of a stressful event affect psychological response to it?" *J Behav Ther Exp Psychiatry* 46: 19-26.

BACKGROUND AND OBJECTIVES: In forensic settings, individuals who experience a traumatic event are often encouraged to recall it soon afterwards to preserve their memory for it. Some theories of the development of post-traumatic stress disorder (PTSD) suggest that this may increase psychopathology. The primary aim of the study was to examine the effect of immediate recall of a trauma analogue video on psychopathology. **METHOD:** Eighty-five undergraduate students were randomised to view a video of a car accident, described as either a real event (high stress) or training event (low stress). They then completed either the Self-Administered Interview (SAI(c), Gabbert, Hope, & Fisher, 2009) or a filler task. All participants returned one week later to provide an account of the event. **RESULTS:** As predicted, participants in the SAI early recall task condition remembered the video content better one week after seeing the video, shown both by their greater recall of correct details and greater rejection of misinformation. However, completing the SAI resulted in higher anxiety immediately afterwards, and more severe PTSD-like symptoms one week later, compared to control condition. PTSD intrusion-like symptoms also predicted more accurate

recall, while avoidance predicted poorer memory. LIMITATIONS: While the trauma analogue video used in this study has been previously used, and did effectively trigger post-traumatic-like symptoms, it is unclear how well these results generalise to actual trauma situations. CONCLUSIONS: These results suggest the relationship between PTSD symptoms and memory might be more complex than previously recognised, with intrusive phenomena possibly promoting memory and avoidance symptoms compromising memory.

Glass, N., N. A. Perrin, et al. (2014). "Livestock/animal assets buffer the impact of conflict-related traumatic events on mental health symptoms for rural women." *PLoS One* 9(11): e111708.

BACKGROUND: In the context of multiple adversities, women are demonstrating resilience in rebuilding their futures, through participation in microfinance programs. In addition to the economic benefits of microfinance, there is evidence to suggest that it is an effective vehicle for improving health. **METHODS:** The parent study is a community-based trial to evaluate the effectiveness of a livestock microfinance intervention, Pigs for Peace (PFP), on health and economic outcomes with households in 10 villages in eastern Democratic Republic of Congo. The analysis for this manuscript includes only baseline data from female participants enrolled in the ongoing parent study. Multiple regression analysis was used to examine if livestock/animal asset value moderates the relationship between conflict-related traumatic events and current mental health symptoms. **FINDINGS:** The majority of women are 25 years or older, married, have on average 4 children in the home and have never attended school. Nearly 50% of women report having at least one livestock/animal asset at baseline. Over the past 10 years, women report on average more than 4 ($M = 4.31$, $SD 3.64$) traumatic events (range 0-18). Women reported symptoms consistent with PTSD with a mean score of .2.30 ($SD = 0.66$ range 0-4) and depression with a mean score of 1.86 ($SD = 0.49$, range 0-3.47). The livestock/animal asset value by conflict-related traumatic events interaction was significant for both the PTSD ($p = 0.021$) and depression ($p = 0.002$) symptom models. **INTERPRETATION:** The study provides evidence of the moderating affect of livestock/animal assets on mental health symptoms for women who have experienced conflict. The findings supports evidence about the importance of livestock/animal assets to economics in rural households but expands on previous research by demonstrating the psychosocial effects of these assets on women's health. **TRIAL REGISTRATION:** clinicaltrials.gov NCT02008708.

Greene, C. A., J. D. Ford, et al. (2014). "Posttraumatic stress mediates the relationship between childhood victimization and current mental health burden in newly incarcerated adults." *Child Abuse Negl* 38(10): 1569-1580.

The purpose of this study was to evaluate the interrelationship among childhood abuse and traumatic loss, posttraumatic stress symptoms (PTSS), and Axis I psychiatric disorders other than PTSD among newly incarcerated adults, and to test a proposed model in which the severity of PTSS mediates the relationship between childhood abuse/loss and adult psychiatric disorders. Four hundred sixty-five male and female inmates participated in a structured clinical research interview. Four types of interpersonal potentially traumatic experiences (physical abuse, sexual abuse, emotional abuse, and traumatic loss) were assessed for occurrence prior to the age of 18 years old.

Current psychiatric disorders and PTSS were also assessed by structured interview. Negative binomial regression was used to evaluate the association between the cumulative number of types of childhood abuse/loss experienced and number of current Axis I disorders, and to test the mediation model. Approximately half of the sample (51%) experienced 1 or more types of childhood abuse/loss, and 30% of the sample had at least one psychiatric disorder other than PTSD. For both men and women, childhood physical abuse and childhood sexual abuse were independently associated with psychiatric morbidity, and an increasing number of types of childhood trauma experienced was associated with an increase in the number of current Axis I diagnoses. However, these associations were no longer statistically significant when severity of PTSS was added to the model, providing support for the proposed mediation model. Implications for secondary prevention services for at-risk inmates are discussed.

Haegen, M. V. and O. Luminet (2015). "Stress, psychosocial mediators and cognitive mediators in parents of child cancer patients and cancer survivors: Attention and working memory pathway perspectives." *J Psychosoc Oncol*: 0.

OBJECTIVE: This review examines stress and its consequences on attention and working memory, stress symptoms in parents of child cancer patients and survivors and long term consequences of stress on cognitive processing in parents of child cancer survivors. **METHOD:** Eligible studies were experimental, meta-analyses and qualitative (2000-2013) from Pubmed, Medline, the Cochrane Library, PsycArticles and Google Scholar. **RESULTS:** We identified 92 eligible papers. They showed that elevated stress can impede performances on tasks requiring attention and memory patterns. In paediatric oncology, parental stress increased shortly after diagnosis involving depression and anxiety. Consequences of stress on cognitive performances were observed mainly among depressed individuals. As regards parents of child cancer survivors, female gender, low SES, innate traits of anxiety/anger predicted the development of PTSS. **CONCLUSION:** Evidence of stress on attention and working memory processes in parents of child cancer survivors is insufficient developed.

Howell, K. H., J. B. Kaplow, et al. (2015). "Predicting adolescent posttraumatic stress in the aftermath of war: differential effects of coping strategies across trauma reminder, loss reminder, and family conflict domains." *Anxiety Stress Coping* 28(1): 88-104.

BACKGROUND AND OBJECTIVES: The vast majority of youth who lived through the Bosnian war were exposed to multiple traumatic events, including interpersonal violence, community destruction, and the loss of a loved one. This study examined factors that predict post-war psychological adjustment, specifically posttraumatic stress, in Bosnian adolescents. **DESIGN:** Regression analyses evaluated theorized differential relations between three types of post-war stressors - exposure to trauma reminders, loss reminders, and intrafamilial conflict - specific coping strategies, and posttraumatic stress symptom dimensions. **METHODS:** We examined 555 Bosnian adolescents, aged 15-19 years, to predict their long-term posttraumatic stress reactions in the aftermath of war. **RESULTS:** Findings indicated that post-war exposure to trauma reminders, loss reminders, and family conflict, as well as engagement and disengagement coping strategies,

predicted posttraumatic stress symptoms. Secondary control engagement coping responses to all three types of post-war stressors were inversely associated with posttraumatic stress symptoms, whereas primary control engagement coping responses to family conflict were inversely associated with hyperarousal symptoms. Disengagement responses to trauma reminders and family conflict were positively associated with re-experiencing symptoms. CONCLUSIONS: These findings shed light on ways in which trauma reminders, loss reminders, and family conflict may intersect with coping responses to influence adolescent postwar adjustment.

Jolani, S., L. E. Frank, et al. (2014). "Dual imputation model for incomplete longitudinal data." *Br J Math Stat Psychol* 67(2): 197-212.

Missing values are a practical issue in the analysis of longitudinal data. Multiple imputation (MI) is a well-known likelihood-based method that has optimal properties in terms of efficiency and consistency if the imputation model is correctly specified. Doubly robust (DR) weighing-based methods protect against misspecification bias if one of the models, but not necessarily both, for the data or the mechanism leading to missing data is correct. We propose a new imputation method that captures the simplicity of MI and protection from the DR method. This method integrates MI and DR to protect against misspecification of the imputation model under a missing at random assumption. Our method avoids analytical complications of missing data particularly in multivariate settings, and is easy to implement in standard statistical packages. Moreover, the proposed method works very well with an intermittent pattern of missingness when other DR methods can not be used. Simulation experiments show that the proposed approach achieves improved performance when one of the models is correct. The method is applied to data from the fireworks disaster study, a randomized clinical trial comparing therapies in disaster-exposed children. We conclude that the new method increases the robustness of imputations.

Khadra, C., N. Wehbe, et al. (2015). "Symptoms of post-traumatic stress disorder among battered women in Lebanon: an exploratory study." *J Interpers Violence* 30(2): 295-313.

Intimate partner violence against women is common in Lebanon and can lead to major health problems. However, the incidence of symptoms of post-traumatic stress disorder (PTSD) in battered women has not been extensively explored in the Lebanese cultural context. The objectives of this study were as follows: (a) to determine the prevalence of PTSD symptoms among women in Lebanon who have been physically abused by their partners, (b) to assess whether the rate of PTSD symptoms varied according to sociodemographic variables, and (c) to reveal other attributes that might be risk factors for developing symptoms of PTSD. Of the 95 physically abused women who met inclusion criteria, 85 completed a questionnaire including sociodemographic questions, the physical abuse subscale of the Composite Abuse Scale (CAS), and the PTSD Checklist-Civilian Version (PCL-C). Results showed a high prevalence of PTSD symptoms (97%), positively correlated with physical violence ($r = .719$). Lower education level and recent abuse were correlated with symptom severity, as were the number of problematic habitual behaviors in the abusive partner and the use of psychotherapy. Increased involvement of health care professionals in the detection of women at risk, with referral to appropriate resources, is suggested to improve prevention and management efforts.

Lueger-Schuster, B., D. Weindl, et al. (2014). "Resilience and mental health in adult survivors of child abuse associated with the institution of the Austrian Catholic Church." *J Trauma Stress* 27(5): 568-575.

In recent years, reports of institutional abuse within the Catholic Church have emerged and research on the consequences on mental health is in its beginnings. In this study, we report findings on current mental health and resilience in a sample of adult survivors of institutional abuse (N = 185). We compared 3 groups of survivors that differed regarding their current mental health to investigate aspects of resilience, coping, and disclosure. The majority of the sample was male (76.2%), the mean age was 56.28 (SD = 9.46) years, and more than 50.0% of the sample was cohabiting/married. Most of the survivors reported severe mental health problems. Known protective factors (education, social support, age) were not associated with mental health in our sample. Our findings corroborate that institutional abuse has long-term effects on mental health. We found that fewer emotional reactions during disclosure, task-oriented coping, and optimism were associated with better mental health. The study was limited by a cross-sectional design, but we conclude that the kind of institutional abuse reported is especially adverse, and thus typical protective factors for mental health do not apply. Future research should focus on intrapersonal factors and institutional dynamics to improve treatment for persons affected by institutional abuse.

Makhashvili, N., I. Chikovani, et al. (2014). "Mental disorders and their association with disability among internally displaced persons and returnees in Georgia." *J Trauma Stress* 27(5): 509-518.

There remains limited evidence on comorbidity of mental disorders among conflict-affected civilians, particularly internally displaced persons (IDPs) and former IDPs who have returned to their home areas (returnees). The study aim was to compare patterns of mental disorders and their influence on disability between IDPs and returnees in the Republic of Georgia. A cross-sectional household survey was conducted with adult IDPs from the conflicts in the 1990s, the 2008 conflict, and returnees. Posttraumatic stress disorder (PTSD), depression, anxiety, and disability were measured using cut scores on Trauma Screening Questionnaire, Patient Health Questionnaire 9, Generalised Anxiety Disorder 7, and the WHO Disability Assessment Schedule 2.0. Among the 3,025 respondents, the probable prevalence of PTSD, depression, anxiety, and comorbidity (>1 condition) was 23.3%, 14.0%, 10.4%, 12.4%, respectively. Pearson correlation coefficients ($p < .001$) were .40 (PTSD with depression), .38 (PTSD with anxiety), and .52 (depression with anxiety). Characteristics associated with mental disorders in regression analyses included displacement (particularly longer-term), cumulative trauma exposure, female gender, older age, poor community conditions, and bad household economic situation; coefficients ranged from 1.50 to 3.79. PTSD, depression, anxiety, and comorbidity were associated with increases in disability of 6.4%, 9.7%, 6.3%, and 15.9%, respectively. A high burden of psychiatric symptoms and disability persist among conflict-affected persons in Georgia.

Mannert, K., S. Dehning, et al. (2014). "Quality of life in Ethiopia's street youth at a rehabilitation center and the association with trauma." *J Trauma Stress* 27(5): 593-601.

Quality of life (QOL) tends to be lower among the homeless than the general population, and traumatic events experienced on the streets have a negative impact on QOL. Low-income countries face a high number of street youth, yet little research has been performed so far on QOL, trauma, and posttraumatic stress disorder (PTSD) among this group. This study aimed at examining the QOL of a sample of Ethiopian street youth within a rehabilitation program and at exploring whether the street youth have experienced traumatic events and show posttraumatic stress symptoms. We interviewed 84 street youths with the World Health Organization Quality of Life Questionnaire (WHOQOL-BREF) and the Diagnostic Interview for Children and Adolescents (DICA). Mean QOL scores differed significantly between the groups assessed at the beginning and at the end of the program (Cohen's $d = 0.48$). Eighty-three percent of the Ethiopian street youths had experienced traumatic events, and 25.0% met criteria for PTSD according to the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders. QOL did not differ between those with and without PTSD symptoms. These findings show the high rate of traumatic events among Ethiopian street youth and the importance for rehabilitation programs that focus on improving QOL. The results of the study may have cultural limitations.

Matulis, S., P. A. Resick, et al. (2014). "Developmentally adapted cognitive processing therapy for adolescents suffering from posttraumatic stress disorder after childhood sexual or physical abuse: a pilot study." *Clin Child Fam Psychol Rev* 17(2): 173-190.

Although childhood sexual abuse and childhood physical abuse (CSA and CPA) have severe psychopathological consequences, there is little evidence supporting psychotherapeutic interventions for adolescents who have experienced CSA or CPA. To provide a treatment tailored to the specific needs of adolescents suffering from abuse-related posttraumatic stress disorder (PTSD), we modified Cognitive Processing Therapy (CPT) by adding new treatment modules and changing the therapy setting. To evaluate the feasibility and efficacy of Developmentally Adapted CPT (D-CPT), we treated 12 adolescents suffering from PTSD secondary to CSA or CPA. Patients were assessed prior to treatment (t0), post-treatment (t1), and 6 weeks after treatment (t2). Assessments included the Clinician-Administered PTSD Scale (CAPS), the UCLA PTSD Index (UCLA), the Children's Depression Inventory (CDI), the Adolescent Dissociative Experiences Scale (A-DES), and the Borderline Symptom List (BSL-23). MANOVAs revealed that posttraumatic stress measurements and associated symptom measurements significantly differed across time points. When comparing t0 with t2, Cohen's d was large with respect to the CAPS scores ($d = 1.45$, $p < .001$) and the UCLA scores ($d = 1.91$, $p < .001$). Cohen's d had a medium magnitude with respect to the CDI scores ($d = .78$, $p < .001$), the A-DES scores ($d = 0.64$, $p < .05$), and the BSL-23 scores ($d = 0.74$, $p < .01$). D-CPT has the potential to reduce PTSD symptoms and comorbid psychopathology in adolescents with histories of CSA or CPA.

Miron, L. R., H. K. Orcutt, et al. (2014). "Differential predictors of transient stress versus posttraumatic stress disorder: evaluating risk following targeted mass violence." *Behav Ther* 45(6): 791-805.

Schools have become a common incident site for targeted mass violence, including mass shootings. Although exposure to mass violence can result in significant distress, most individuals are

able to fully recover over time, while a minority develop more pervasive pathology, such as PTSD. The present study investigated how several pre- and posttrauma factors predict posttraumatic stress symptoms (PTSS) in both the acute and distal aftermath of a campus mass shooting using a sample with known levels of pretrauma functioning (N=573). Although the largest proportion of participants evidenced resilience following exposure to the event (46.1%), many reported high rates of PTSS shortly after the shooting (42.1%) and a smaller proportion (11.9%) met criteria for probable PTSD both in the acute and more distal aftermath of the event. While several preshooting factors predicted heightened PTSS after the shooting, prior trauma exposure was the only preshooting variable shown to significantly differentiate between those who experienced transient versus prolonged distress. Among postshooting predictors, individuals reporting greater emotion dysregulation and peritraumatic dissociative experiences were over four times more likely to have elevated PTSS 8 months postshooting compared with those reporting less dysregulation and dissociative experiences. Individuals with less exposure to the shooting, fewer prior traumatic experiences, and greater satisfaction with social support were more likely to recover from acute distress. Overall, results suggest that, while pretrauma factors may differentiate between those who are resilient in the aftermath of a mass shooting and those who experience heightened distress, several event-level and posttrauma coping factors help distinguish between those who eventually recover and those whose PTSD symptoms persist over time.

Muller, M., C. Vandeleur, et al. (2015). "Childhood adversities as specific contributors to the co-occurrence of posttraumatic stress and alcohol use disorders." *Psychiatry Res.*

There is much evidence that alcohol use disorders (AUD) often co-occur with posttraumatic stress disorders (PTSD), and that the comorbid condition is associated with a more severe clinical profile than that of PTSD without AUD. However, little is known about the role of childhood adversities as specific risk factors for the development of AUD in individuals presenting with PTSD. The aim of the study was to explore whether specific stressors from the spectrum of trauma and childhood adversities contribute to the development of AUD among subjects with PTSD. From a large community sample, of N=140 individuals with PTSD, N=24 (17.14%) received an additional diagnosis of AUD with an onset after the onset of PTSD. Those with comorbid PTSD/AUD and those with PTSD only were compared regarding type and features of their trauma, childhood adversities and psychiatric comorbidity. Compared to PTSD alone, PTSD/AUD was associated with higher levels of stress in terms of childhood adversities; in particular, sexual abuse below the age of 16, but also with having been brought up in a foster home. PTSD/AUD was also associated with an earlier age of adverse events. Treatment of AUD should include standardized assessments of trauma, especially of trauma experienced during childhood.

Murphy, L. K., E. M. Rodriguez, et al. (2015). "Longitudinal associations among maternal communication and adolescent posttraumatic stress symptoms after cancer diagnosis." *Psychooncology.*

OBJECTIVE: The purpose of this study was to prospectively examine adolescent and maternal posttraumatic stress symptoms (PTSS) and maternal communication from time near cancer

diagnosis to 12-month follow-up to identify potential risk factors for adolescent PTSS. METHODS: Forty-one adolescents with cancer (10-17 years, 54% female) and their mothers self-reported PTSS at T1 (two months after cancer diagnosis) and T3 (1-year follow-up). At T2 (3 months after T1), mother-adolescent dyads were videotaped discussing cancer, and maternal communication was coded with macro (harsh and withdrawn) and micro (solicits and validations) systems. RESULTS: Adolescent PTSS at T1 was associated with adolescent PTSS at T3. Greater maternal PTSS at T1 predicted greater harsh maternal communication at T2. There was an indirect effect of maternal PTSS at T1 on adolescent PTSS at T3 through maternal validations at T2. CONCLUSIONS: Findings underscore the importance of maternal PTSS, maternal communication, and subsequent adolescent PTSS over the course of treatment of childhood cancer. Copyright (c) 2015 John Wiley & Sons, Ltd.

Nazarov, A., P. Frewen, et al. (2015). "Comprehension of affective prosody in women with post-traumatic stress disorder related to childhood abuse." *Acta Psychiatr Scand* 131(5): 342-349.

OBJECTIVE: Although deficits in memory and cognitive processing are evident in post-traumatic stress disorder (PTSD), difficulties with social cognition and the impact of such difficulties on interpersonal functioning are poorly understood. Here, we examined the ability of women diagnosed with PTSD related to childhood abuse to discriminate affective prosody, a central component of social cognition. METHOD: Women with PTSD and healthy controls (HCs) completed two computer-based tasks assessing affective prosody: (i) recognition (categorizing foreign-language excerpts as angry, fearful, sad, or happy) and (ii) discrimination (identifying whether two excerpts played consecutively had the 'same' or 'different' emotion). The association of performance with symptom presentation, trauma history, and interpersonal functioning was also explored. RESULTS: Women with PTSD were slower than HCs at identifying happiness, sadness, and fear, but not anger in the speech excerpts. The presence of dissociative symptoms was related to reduced accuracy on the discrimination task. An increased severity of childhood trauma was associated with reduced accuracy on the discrimination task and with slower identification of emotional prosody. CONCLUSION: Exposure to childhood trauma is associated with long-term, atypical development in the interpretation of prosodic cues in speech. The findings have implications for the intergenerational transmission of trauma.

Nishi, D., K. Hashimoto, et al. (2014). "Serum neuropeptide Y in accident survivors with depression or posttraumatic stress disorder." *Neurosci Res* 83: 8-12.

Although neuropeptide Y (NPY) has received attention for its potential anti-depressive and anti-anxiety effect, evidence in humans has been limited. This study aimed to clarify the relationships between serum NPY and depressive disorders, and posttraumatic stress disorder (PTSD) in accident survivors. Depressive disorders and PTSD were diagnosed by structural interviews at 1-month follow-up, and serum NPY was measured at the first assessment and 1-month follow-up. Analysis of variance was used to investigate significance of the differences identified. Furthermore, resilience was measured by self-report questionnaires. Multiple linear regression analyses were used to examine the relationship between resilience and serum NPY. Three hundred accident survivors participated in the assessment at the first assessment, and 138 completed the assessment at 1-

month follow-up. Twenty-six participants had major depressive disorder and 6 had minor depressive disorder. Nine participants had PTSD and 16 had partial PTSD. No relationship existed between serum NPY and depressive disorders, PTSD, and resilience. The results of cannot be compared with those of NPY in the central nervous system (CNS), but these findings might be due to the nature of depression and PTSD in accident survivors. Further studies are needed to examine the relationships between NPY in CNS and depression and PTSD.

Raymond, S. (2015). "Female genital mutilation: everyone's business." *J Fam Health* 25(3): 40-44.

Resick, P. A., M. K. Suvak, et al. (2014). "The impact of childhood abuse among women with assault-related PTSD receiving short-term cognitive-behavioral therapy." *J Trauma Stress* 27(5): 558-567.

This study examined the effect of child sexual or physical abuse on brief cognitive-behavioral therapy treatments with adults with posttraumatic stress disorder (PTSD). We analyzed secondary data from two randomized controlled trials (Resick, Nishith, Weaver, Astin, & Feuer, 2002; Resick et al., 2008) that included women with PTSD who did or did not have child sexual abuse (CSA) or child physical abuse (CPA) histories to determine whether childhood abuse impacted dropout rate or reduction in PTSD symptoms. In Study 1, presence, duration, or severity of CSA was not associated with dropout; however, frequency of CSA significantly predicted dropout (OR = 1.23). A significant CPA Severity x Treatment Group interaction emerged such that CPA severity was associated with greater dropout for prolonged exposure (PE; OR = 1.45), but not cognitive processing therapy (CPT; OR = 0.90). Study 2 found no differences in dropout. Study 1, comparing CPT and PE among women who experienced at least 1 rape found no differences in outcome based on childhood abuse history ($p(2) = .000-.009$). Study 2, a dismantling study of CPT with women seeking treatment for adult or child sexual or physical abuse found that for those with no childhood abuse, CPT-C, the cognitive-only version of CPT, had an advantage, whereas both forms of CPT worked best for those with higher frequency of childhood abuse; the effect size was small.

Roos, L. E., J. Distasio, et al. (2014). "A history in-care predicts unique characteristics in a homeless population with mental illness." *Child Abuse Negl* 38(10): 1618-1627.

Multiple studies of homeless persons report an increased prevalence of a history in-care, but there is a dearth of information on associated outcomes or relevant demographic profiles. This information is critical to understanding if certain individuals are at elevated risk or might benefit from specific intervention. Here, we investigate how a history in-care relates to demographics and multiple outcome measures in a homeless population with mental illness. Using the Mini International Neuropsychiatric Interview (MINI), the Short-Form 12, and a trauma questionnaire, we investigated baseline differences in demographics and length of homelessness in the At Home/Chez Soi Trial (N=504) Winnipeg homeless population with and without a history in-care. Approximately 50% of the homeless sample reported a history in-care. This group was significantly more likely to be young, female, married or cohabitating, of Aboriginal heritage, have less education, and have longer lifetime homelessness. Individuals of Aboriginal heritage with a history in-care were significantly more likely to report a familial history of residential school. Individuals with a history in-care experienced

different prevalence rates of Axis 1 mental disorders. Those with a history in-care also reported significantly more traumatic events (particularly interpersonal). A distinctive high-risk profile emerged for individuals with a history in-care. Sociocultural factors of colonization and intergenerational transmission of trauma appear to be particularly relevant in the trajectories for individuals of Aboriginal heritage. Given the high prevalence of a history in-care, interventions and policy should reflect the specific vulnerability of this population, particularly in regards to trauma-informed services.

Schenkel, L. S., G. Rothman-Marshall, et al. (2014). "Child maltreatment and trauma exposure among deaf and hard of hearing young adults." *Child Abuse Negl* 38(10): 1581-1589.

The purpose of the present study was to examine the prevalence of child maltreatment and lifetime exposure to other traumatic events in a sample of deaf and hard of hearing (DHH; n=147) and matched hearing (H; n=317) college students. Participants completed measures of child maltreatment (CM), adult victimization and trauma exposure, and current symptoms of posttraumatic stress disorder (PTSD). Overall, DHH participants reported significantly more instances of CM compared to H participants, with 76% of DHH reporting some type of childhood abuse or neglect. Additionally, DHH participants reported experiencing a higher number of different types of CM, and also reported increased incidents of lifetime trauma exposure and elevated PTSD symptoms. Severity of deafness increased the risk of maltreatment, with deaf participants reporting more instances of CM than hard of hearing participants, and hard of hearing participants reporting more instances of CM than H participants. Among DHH participants, having a deaf sibling was associated with reduced risk for victimization, and identification with the Deaf community was associated with fewer current symptoms of PTSD. A regression model including measures of childhood physical and sexual abuse significantly predicted adult re-victimization and accounted for 27% of the variance among DHH participants. DHH participants report significantly higher rates of CM, lifetime trauma, and PTSD symptoms compared to H participants. Severity of deafness appears to increase the risk of being victimized. Being part of the Deaf community and having access to others who are deaf appear to be important protective factors for psychological well-being among DHH individuals.

Self-Brown, S., B. S. Lai, et al. (2014). "Maternal posttraumatic stress disorder symptom trajectories following Hurricane Katrina: An initial examination of the impact of maternal trajectories on the well-being of disaster-exposed youth." *Int J Public Health* 59(6): 957-965.

OBJECTIVES: This study examined trajectories of posttraumatic stress disorder symptoms in impoverished mothers impacted by Hurricane Katrina, as well as how predictive the maternal trajectories were for youth posttraumatic stress symptoms 2 years post-Katrina. **METHODS:** 360 mother participants displaced by Hurricane Katrina completed self-report measures across four time points related to Hurricane exposure, trauma history, and posttraumatic stress symptoms. Additionally, the youth offspring completed a self-report measure of posttraumatic stress symptoms. **RESULTS:** Latent Class Growth Analysis demonstrated three primary trajectories emerged among females impacted by Katrina, namely, (1) chronic (4 %), (2) recovering (30 %), and (3) resilient (66

%), respectively. These trajectories were significantly impacted by prior trauma history, but not hurricane exposure. Additionally, data indicated that children whose parents fell into the chronic PTS trajectory also reported high levels of PTS symptoms. CONCLUSIONS: This study identified three main trajectories typical of female PTS symptoms following disaster and was the first known study to document associations between PTS outcomes among adults and their offspring impacted by a large natural disaster. Future research is warranted and should explore additional risk and protective factors that impact both the parental and child outcomes.

Shalev, I., T. E. Moffitt, et al. (2014). "Internalizing disorders and leukocyte telomere erosion: a prospective study of depression, generalized anxiety disorder and post-traumatic stress disorder." *Mol Psychiatry* 19(11): 1163-1170.

There is evidence that persistent psychiatric disorders lead to age-related disease and premature mortality. Telomere length has emerged as a promising biomarker in studies that test the hypothesis that internalizing psychiatric disorders are associated with accumulating cellular damage. We tested the association between the persistence of internalizing disorders (depression, generalized anxiety disorder and post-traumatic stress disorder) and leukocyte telomere length (LTL) in the prospective longitudinal Dunedin Study (n=1037). Analyses showed that the persistence of internalizing disorders across repeated assessments from ages 11 to 38 years predicted shorter LTL at age 38 years in a dose-response manner, specifically in men (beta=-0.137, 95% confidence interval (CI): -0.232, -0.042, P=0.005). This association was not accounted for by alternative explanatory factors, including childhood maltreatment, tobacco smoking, substance dependence, psychiatric medication use, poor physical health or low socioeconomic status. Additional analyses using DNA from blood collected at two time points (ages 26 and 38 years) showed that LTL erosion was accelerated among men who were diagnosed with internalizing disorder in the interim (beta=-0.111, 95% CI: -0.184, -0.037, P=0.003). No significant associations were found among women in any analysis, highlighting potential sex differences in internalizing-related telomere biology. These findings point to a potential mechanism linking internalizing disorders to accelerated biological aging in the first half of the life course, particularly in men. Because internalizing disorders are treatable, the findings suggest the hypothesis that treating psychiatric disorders in the first half of the life course may reduce the population burden of age-related disease and extend health expectancy.

Stoppelbein, L. and L. Greening (2015). "A longitudinal study of the role of cortisol in posttraumatic stress disorder symptom clusters." *Anxiety Stress Coping* 28(1): 17-30.

BACKGROUND AND OBJECTIVES: Research examining the role of cortisol in posttraumatic stress disorder (PTSD) has largely been cross-sectional studies and few studies have examined cortisol in relation to specific symptom clusters. Examining cortisol in relation to specific PTSD symptom clusters could aid in identifying candidates for symptom-specific treatments. Hence, cortisol was examined in relation to specific PTSD symptom clusters including reexperiencing, avoidance, numbing, and hyperarousal symptoms. **DESIGN:** A repeated-measures longitudinal design was utilized to predict PTSD symptom clusters. **METHODS:** Mothers of children (N = 27) diagnosed with cancer completed a measure of PTSD, and they provided salivary cortisol samples at the time of

their child's diagnosis as well as monthly for the following 12 months. RESULTS: Multi-level modeling analyses revealed that higher cortisol levels were significantly related to higher levels of numbing symptoms. Although numbing symptoms declined as cortisol levels declined across 12 months postcancer diagnosis, mothers with higher cortisol levels still reported more numbing symptoms. Reexperiencing, avoidance, and hyperarousal symptoms were not found to be related to cortisol level across time. CONCLUSIONS: The findings offer support for the role of cortisol in the manifestation of numbing symptoms. Further research is recommended with other trauma groups to maximize generalizations.

Sui, S. G., M. E. King, et al. (2014). "Posttraumatic stress disorder among female victims of sexual assault in China: prevalence and psychosocial factors." *Asia Pac Psychiatry* 6(4): 405-413.

INTRODUCTION: Sexual assault is one of the most traumatic stressors one may experience in life. Although studies have investigated the prevalence of posttraumatic stress disorder (PTSD) and associated psychosocial factors on victims of sexual assault internationally, such studies in Mainland China are limited. METHODS: Two hundred thirt-three Chinese females (aged 17-38) victims of sexual assault were surveyed in three Guangdong province cities (Guangzhou city, Shenzhen city, and Huizhou city). The Clinician-Administered PTSD Scale, Eysenck Personality Questionnaire, PTSD Checklist Civilian Version, Social Support Rating Scale, and Trait Coping Style Questionnaire were used. RESULTS: The prevalence of PTSD in Chinese female victims of sexual assault was 15.25% (34/223). Six psychosocial factors were found to be significant for PTSD symptomatology, including objective support (beta = -1.01, P = 0.001), subjective support (beta = -0.59, P < 0.001), support utilization (beta = -1.03, P = 0.005), negative coping style (beta = 0.58, P < 0.001), positive coping style (beta = -0.44, P < 0.001), and neuroticism (beta = 0.48, P < 0.001). DISCUSSION: These findings suggest that negative coping bias and neuroticism were predisposing risk factors that increase PTSD symptoms, while objective support, subjective support, support utilization, and positive coping style were protective factors for PTSD following sexual assault, and provide prima facie evidence for posttrauma intervention.

Sumner, J. A., R. H. Pietrzak, et al. (2014). "Elucidating dimensions of posttraumatic stress symptoms and their functional correlates in disaster-exposed adolescents." *J Psychiatr Res* 59: 85-92.

The aim of this study was to elucidate the dimensional structure of posttraumatic stress disorder (PTSD) and potential moderators and functional correlates of this structure in disaster-affected adolescents. A population-based sample of 2000 adolescents aged 12-17 years (M = 14.5 years; 51% female) completed interviews on post-tornado PTSD symptoms, substance use, and parent-adolescent conflict between 4 and 13 months (M = 8.8, SD = 2.6) after tornado exposure. Confirmatory factor analyses revealed that all models fit well but a 5-factor dysphoric arousal model provided a statistically significantly better representation of adolescent PTSD symptoms compared to 4-factor dysphoria and emotional numbing models. There was evidence of measurement invariance of the dysphoric arousal model across gender and age, although girls and older adolescents aged 15-17 years had higher mean scores than boys and younger adolescents aged 12-14 years,

respectively, on some PTSD dimensions. Differential magnitudes of association between PTSD symptom dimensions and functional correlates were observed, with emotional numbing symptoms most strongly positively associated with problematic substance use since the tornado, and dysphoric arousal symptoms most strongly positively associated with parent-adolescent conflict; both correlations were significantly larger than the corresponding correlations with anxious arousal. Taken together, these results suggest that the dimensional structure of tornado-related PTSD symptomatology in adolescents is optimally characterized by five separate clusters of re-experiencing, avoidance, numbing, dysphoric arousal, and anxious arousal symptoms, which showed unique associations with functional correlates. Findings emphasize that PTSD in disaster-exposed adolescents is not best conceptualized as a homogenous construct and highlight potential differential targets for post-disaster assessment and intervention.

Suzuki, A., L. Poon, et al. (2014). "Long term effects of childhood trauma on cortisol stress reactivity in adulthood and relationship to the occurrence of depression." *Psychoneuroendocrinology* 50: 289-299.

BACKGROUND AND AIMS: Childhood trauma may have longstanding effects on individuals' propensity to react adversely to stress, and also predisposes individuals to suffer from depression. The current study aimed to examine stress reactivity in individuals with and without a history of childhood trauma by measuring cortisol responses to the passive viewing of stressful images, specifically including images relevant to childhood trauma. In addition, participants with and without a diagnosis of current depression were studied to investigate whether cortisol stress reactivity may underlie resilience or vulnerability to depression. **METHODS:** The study involved 17 healthy participants with and 24 without a history of childhood trauma; and 21 depressed patients with and 18 without a history of childhood trauma. Salivary cortisol was measured before, during and after participants were shown affectively laden images, including standardised scenes from the International Affective Picture System and also images suggestive of childhood abuse. Cortisol stress reactivity to the passive image viewing was compared between groups. **RESULTS:** In those who had experienced childhood trauma, cortisol stress responses were overall low and the same in those who were depressed and those who were not (mean stress reactivity variable - depressed: 0.8 nmol/l; non-depressed: 0.72 nmol/l). In contrast, cortisol stress reactivity was raised in depressed subjects relative to those who were not depressed in those without a history of childhood trauma (mean stress reactivity variable - depressed: 3.75 nmol/l; non-depressed: 0.1 nmol/l). **CONCLUSIONS:** A history of childhood trauma has longstanding effects on adulthood cortisol responses to stress, particularly in that depressed individuals with a history of childhood trauma show blunted cortisol responses. However, there were no differences between abused depressed and abused non-depressed subjects on cortisol stress responses, suggesting that such a finding does not explain subsequent susceptibility to depression. On the other hand, patients who experience depression without a history of childhood trauma show enhanced cortisol stress reactivity, which could help explain the aetiology of their depressive illnesses. Differences between the current findings and those using other pharmacological and stress challenge paradigms may relate to the type of stimuli used and to dysfunction at different levels of the hypothalamic-pituitary-adrenal (HPA) axis.

Tavakkoli, M., M. A. Cohen, et al. (2014). "Caring for persons with early childhood trauma, PTSD, and HIV: a curriculum for clinicians." *Acad Psychiatry* 38(6): 696-700.

Access and adherence to medical care enable persons with HIV to live longer and healthier lives. Adherence to care improves quality of life, prevents progression to AIDS, and also has significant public health implications. Early childhood trauma-induced posttraumatic stress disorder (PTSD) is one factor that has been identified as an obstacle to adherence to both risk reduction and HIV care. The authors developed a 4-h curriculum to provide clinicians with more confidence in their ability to elicit a trauma history, diagnose PTSD, and address trauma and its sequelae in persons with HIV to improve adherence to medical care, antiretroviral medications, and risk reduction. The curriculum was designed to address the educational needs of primary care physicians, infectious disease specialists, psychiatrists, other specialists, psychologists, social workers, nurses, residents, medical students, and other trainees who provide care for persons infected with and affected by HIV.

Tull, M. T., J. R. Bardeen, et al. (2015). "A prospective investigation of emotion dysregulation as a moderator of the relation between posttraumatic stress symptoms and substance use severity." *J Anxiety Disord* 29: 52-60.

Despite strong evidence for an association between the experience of posttraumatic stress (PTS) symptoms and substance use, little is known about the particular individuals most at-risk for problematic substance use in response to PTS symptoms. Consequently, the goal of this study was to conduct a prospective investigation of the moderating role of emotion dysregulation (assessed through self-report and behavioral measures) in the relation between PTS symptoms and substance use 8-months later within a sample of 106 young adult women. No main effect of PTS symptoms on substance use was found. Instead, PTS symptoms were only associated with later substance use in the context of heightened emotion dysregulation. Results provide support for emotion dysregulation as a key factor that may increase risk for substance use among women experiencing PTS symptoms and highlight a target for future interventions aimed at reducing risk for the development of maladaptive behaviors stemming from PTS symptoms.

Usta, M. B., O. K. Tuncel, et al. (2015). "Decreased dehydroepiandrosterone sulphate levels in adolescents with post-traumatic stress disorder after single sexual trauma." *Nord J Psychiatry*: 1-5.

BACKGROUND: Recent evidence shows that the hypothalamic-pituitary-adrenal (HPA) axis can be dysregulated in chronic sexual abuse victims with post-traumatic stress disorder (PTSD). We hypothesized that PTSD in adolescents exposed to a single sexual trauma may function as a chronic stressor leading to HPA-axis dysregulation. **AIMS:** The objective of this study was to assess dehydroepiandrosterone sulphate (DHEA-S) and cortisol levels in female adolescents |with single sexual trauma-related PTSD compared to healthy controls. **METHOD:** We assessed 20 female adolescent (age 12-18) single sexual trauma victims with PTSD from the Ondokuz Mayıs University Department of Child and Adolescent Psychiatry between December 2013 and December 2014. PTSD symptoms were assessed using the Child Depression Inventory (CDI) and Child Posttraumatic Stress Reaction Index (CPSRI). Blood cortisol and DHEA-S were measured in 20 female adolescent

sexual abuse victims with PTSD and 20 healthy adolescents after 12-h fasting using the chemiluminescence method. RESULTS: Compared to age-matched controls, female adolescent sexual abuse victims with PTSD had significantly lower DHEA-S levels ($U = 70.00$, $Z = -3.517$, $p = 0.01$, $r = 0.55$). There was also a significant negative correlation between DHEA-S and CDI scores (Spearman $r = -0.522$, $p < 0.01$). CONCLUSIONS: Decreased DHEA-S levels and correlation with depressive symptoms are evidence for a dysregulated HPA-axis in female adolescent single sexual trauma victims with PTSD. Further research is now recommended with large patient groups in order to maximize generalizations.

van der Walt, L., S. Suliman, et al. (2014). "Resilience and post-traumatic stress disorder in the acute aftermath of rape: a comparative analysis of adolescents versus adults." *J Child Adolesc Ment Health* 26(3): 239-249.

BACKGROUND: Rape trauma contributes significantly to the mental burden of disease, affecting resilience and vulnerabilities at every developmental life stage. Appropriate resilience-promoting strategies could potentially buffer or protect trauma-exposed individuals from psychopathology. AIM: This study aimed to assess and compare (using validated measuring instruments) resilience, post-traumatic stress disorder (PTSD) and other variables in the acute aftermath of rape, between adolescent and adult females and to assess associations with these variables. METHOD: We conducted a comparative analysis of resilience, PTSD, prior trauma, demographic variables and psychiatric morbidity in 41 adolescent and 47 adult female rape survivors six weeks post-rape. We assessed the relationship of resilience to PTSD, demographic variables and prior trauma and investigated if resilience levels predicted PTSD after adjusting for prior trauma. RESULTS: We found no significant differences in resilience levels between the groups, but the adolescent PTSD rate (40%) was double that in adults (20%). In adults, a significant negative correlation was evident between resilience and PTSD symptoms scores. CONCLUSION: More knowledge of resilience versus stress susceptibility for PTSD throughout the lifespan is needed and can inform the development of more effective clinical assessment and resilience-promoting strategies.

Veer, I. M., N. Y. Oei, et al. (2015). "Evidence for smaller right amygdala volumes in posttraumatic stress disorder following childhood trauma." *Psychiatry Res.*

Hippocampus and amygdala volumes in posttraumatic stress disorder (PTSD) related to childhood trauma are relatively understudied, albeit the potential importance to the disorder. Whereas some studies reported smaller hippocampal volumes, little evidence was found for abnormal amygdala volumes. Here we investigated hippocampus and amygdala volumes and shapes in an adult sample of PTSD patients related to childhood trauma. T1-weighted MR images were acquired from 12 female PTSD patients with trauma related to physical, sexual, and/or emotional abuse before age 18, and from 12 matched controls. Hippocampus and amygdala were segmented, and volumes were calculated and corrected for the total intracranial volume. Additionally, a shape analysis was done on the surface of the structures to explore abnormalities in specific subnuclei. Smaller right amygdala volumes were found in PTSD patients as compared with

the controls. This difference appeared to be located specifically in the basolateral and superficial nuclei groups. Severity of sexual abuse during childhood was negatively correlated with the size of the amygdala. No difference in hippocampal volumes was found. Although our results are not conclusive, traumatic events in childhood might impede normal development of the amygdala, which could render a person more vulnerable to develop PTSD later in life.

Vloet, A., M. Simons, et al. (2014). "Long-term symptoms and posttraumatic growth in traumatised adolescents: findings from a specialised outpatient clinic." *J Trauma Stress* 27(5): 622-625.

Although traumatic experiences are associated with an increased risk of developing psychiatric disorders, little is known regarding the long-term outcomes of traumatised adolescents. In the current study, 42 traumatised adolescents who had been referred to a specialised health service were reassessed 2 to 5 years after the traumatic event. The course of posttraumatic stress disorder (PTSD) and other psychiatric symptoms, the development of posttraumatic growth (PTG), and parental PTSD were analysed. The rate of PTSD (full and partial) declined from 59.5% to 11.9% between the first assessment and the follow-up. On average, low levels of PTG were reported by the adolescents at follow-up. Sexual abuse was associated with most severe PTSD symptoms at initial assessment ($\eta^2 = .18$) and the highest PTG ($\eta^2 = .12$). Adolescents with psychotherapeutic support showed the largest symptom reduction ($\eta^2 = .15$). Adolescent PTSD at follow-up was shown to be correlated with both PTG ($r = .34$) and parental PTSD ($r = .58$). The results highlight the need for psychotherapeutic support for traumatised adolescents and their parents to prevent long-term psychological impairment. The development of PTG should be considered in the aftermath of trauma and its relevance for posttraumatic recovery should be addressed in future studies.

Weinberger, S. E., D. B. Hoyt, et al. (2015). "Firearm-related injury and death in the United States: a call to action from 8 health professional organizations and the American Bar Association." *Ann Intern Med* 162(7): 513-516.

Deaths and injuries related to firearms constitute a major public health problem in the United States. In response to firearm violence and other firearm-related injuries and deaths, an interdisciplinary, interprofessional group of leaders of 8 national health professional organizations and the American Bar Association, representing the official policy positions of their organizations, advocate a series of measures aimed at reducing the health and public health consequences of firearms. The specific recommendations include universal background checks of gun purchasers, elimination of physician "gag laws," restricting the manufacture and sale of military-style assault weapons and large-capacity magazines for civilian use, and research to support strategies for reducing firearm-related injuries and deaths. The health professional organizations also advocate for improved access to mental health services and avoidance of stigmatization of persons with mental and substance use disorders through blanket reporting laws. The American Bar Association, acting through its Standing Committee on Gun Violence, confirms that none of these recommendations conflict with the Second Amendment or previous rulings of the U.S. Supreme Court.

Witthoft, M., E. Borgmann, et al. (2015). "Body-related attentional biases in patients with posttraumatic stress disorder resulting from childhood sexual abuse with and without co-occurring borderline personality disorder." *J Behav Ther Exp Psychiatry* 46: 72-77.

BACKGROUND AND OBJECTIVES: Disturbed body perception is a common characteristic of patients with posttraumatic stress disorder (PTSD) after childhood sexual abuse (CSA). We examined the extent to which biased information processing of body related stimuli was related to CSA. **METHODS:** Patients with PTSD after CSA (PTSD group; n = 61) were compared to healthy controls (HC group; n = 30). The PTSD group was subdivided into patients with comorbid Borderline Personality Disorder (BPD; PTSD+ group) and patients without BPD (PTSD-group). We used an emotional Stroop task (EST) with body-related words to assess biased information processing. **RESULTS:** Only patients in the PTSD+ group but not in the PTSD-group showed a significantly stronger attentional bias to body related words compared to the HC group (p = .009). **LIMITATIONS:** Recruitment in in-patient setting might have led to a non-representative sample of PTSD patients. The PTSD patients were not characterized regarding anything other than the mentioned mental disorders. Potentially, the body related words may have been associated with offenders' body areas, but not with the patients. **CONCLUSION:** We found that patients with PTSD and comorbid BPD had a stronger attentional bias towards body related stimuli in comparison to other groups. This suggests that the observed attentional bias is a product of CSA combined with the emotion regulation difficulties characteristic of BPD. Future studies should test whether directly targeting body-related abnormalities in information processing can improve existing treatments for patients with CSA and BPD.

Zerach, G. (2015). "Secondary growth among former prisoners of war's adult children: The result of exposure to stress, secondary traumatization, or personality traits?" *Psychol Trauma* 7(4): 313-323.

The long-term toll of war captivity on secondary traumatization (ST) on adult children has recently been exemplified. Several studies have also revealed that indirect exposure to trauma might be accompanied by positive psychological changes. This study examined secondary posttraumatic growth (SG) among adult children of former prisoners of war (ex-POWs' children) who were compared with adult children of comparable veterans (controls' children). Furthermore, we examined the role of five-factor personality traits in the associations between exposure to stress stemming from fathers' behaviors, ST symptoms, and SG. Participants were Israeli ex-POWs' children (N = 98) and controls' children (N = 90), whose fathers fought in the 1973 Yom Kippur War. Results show that ex-POWs' children reported higher levels of SG compared with controls' children. ST symptoms were found to mediate the association between research group and SG, and the direct effect was found to be conditioned at the levels of participants' extroversion. Furthermore, among ex-POWs' children, extroversion and openness to the experience personality traits, as well as exposure to stress, were found to predict SG. Forty years after the war ended, the experience of living with ex-POWs is associated with ex-POWs' children SG that might be more related to their exposure to stress and personality traits than their ST symptoms. Clinical interventions aiming to increase the levels of SG among indirect victims of captivity should consider the influence of pretrauma resources, trauma characteristics, and posttrauma factors. (PsycINFO Database Record