Annotated Bibliography

Occupational Stressors in Corrections Work

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Contents

Introduction

Corrections work of all disciplines, whether in institutional or in community-based settings, has been recognized as being exceptionally stressful. Traditionally, this has been regarded as a consequence of staff's exposure to multiple organizational stressors and also operational stressors. Examples of organizational stressors are role problems, demanding interactions with other staff or justice-involved individuals, and low organizational support. Examples of operational stressors are shift work, high workloads, and mandatory overtime. The effects of these types of stressors have also been thought to result in "burnout."

Recently, a more insidious source of occupational stress has been recognized in the corrections profession—that of exposure to potentially traumatic events and material. Such exposure can be direct (first hand), such as while responding in person to incidents of violence, injury or death, or being assaulted on the job. Traumatic exposure can also be indirect (second hand), such as while hearing about or viewing videos of critical incidents or reading presentencing investigation reports.

This annotated bibliography was developed in an effort to provide current and useful information to corrections professionals regarding possible effects of traumatic and other high-stress exposure on staff health and wellness. In addition to literature on traumatic stress in corrections, research on organizational stress, operational stress and burnout in corrections is included. The reason for this is that exposure to traumatic stress frequently co-occurs with operational and organizational stressors, and contributes to the overall outcome of traumatization and burnout. Non-corrections literature is referenced on the subject of psychological trauma and resilience in the general population and in other high-risk occupations to provide a context for and meaningful comparisons with the corrections-related findings.

Occupational Traumatic Exposure of Corrections Professionals

Bierie, D. (2012). Is tougher better? The Impact of physical prison conditions on inmate violence. *International Journal of Offender Therapy and Comparative Criminology, 56,* 338–355.

> The author examined whether harsh physical conditions in prisons are associated with offender violence. Survey data were collected from a representative random sample of staff at each of the 114 federal prisons operating in 2007. Staff perceptions of noise, clutter, dilapidation, and lack of inmate privacy in the units were combined to reflect physical conditions of each prison. The number of serious assaults at each prison was collected over the same time period referenced in the staff survey. Results showed that harsher physical prison conditions corresponded to significantly higher rates of serious violence committed by inmates. This finding illustrates how operational stressors in corrections facilities can contribute to an increased probability that staff will be exposed to traumatic stress as well.

Denhof, M.D., & Spinaris, C.G. (2014). The Violence Injury and Death Exposure Scale (VIDES).

> The Violence Injury and Death Exposure Scale (VIDES) is a psychometrically sound, valid, assessment tool that assesses work role or workplace exposure to violence, injury, and death events. It generates a total score based upon the number of violence, injury, and death events experienced, a range of types of exposures to such events that include both direct and indirect types of traumatic exposure, and taking into account the timing/recency of exposure(s). The VIDES was designed primarily for group-based assessment for organizations interested in evaluating the status of their staff as a whole. The VIDES was made available by its authors as a Public Domain instrument in 2013.
> http://desertwaters.com/wp-content/uploads/2014/01/VIDES_Data_Sheet.pdf

Denhof, M.D., Spinaris, C.G., & Morton, G.R. (2014). Occupational Stressors in Corrections Organizations: Types, Effects and Solutions.

> "The primary goal of corrections work is the safe and secure management and rehabilitation of justice-involved individuals, whether in locked facilities or within community supervision programs. Pursuit of this goal comes with demanding requirements such as the necessity of staff to maintain constant heightened vigilance while they work and also adhere to strict security protocols. In addition, corrections staff must perform their duties within harsh physical environments and with repeated exposure to violence, injury, and death events. Data supports a health and functioning toll of corrections work that must be not only endured but overcome if corrections staff are to perform optimally over time and if staff are to develop a sense of job-related success, pride, meaning, and professional fulfillment. Meeting and overcoming the occupation-specific challenges of corrections work will, by necessity, require an accurate and specific understanding of the converging forces impinging on staff's health and functioning, how these manifest, and how they can be deterred. This paper presents an evidence-supported model and framework for the comprehensive understanding of occupational threats to corrections workplace health and functioning as well as a data-driven and evidence-based strategy for addressing them" (p. 1). Sections of this paper include: types of stressors in corrections environments; direct and indirect traumatic exposure; use of varying terminology in the literature regarding traumatic exposure; types of corrections fatigue components; interacting components; a six-stage model for addressing corrections fatigue; and summary. [ANNOTATION FROM PUBLISHER]
> http://nicic.gov/library/028299
> https://s3.amazonaws.com/static.nicic.gov/Library/028299.pdf

Fisher, P. (2000). *The road back to wellness: Workplace stress, burnout and trauma in corrections.* Victoria, BC: Spectrum Press.

> The author examines a comprehensive spectrum of stressors that impinge on corrections workers. She discusses job stress, burnout, sociocultural workplace stress (discrimination and workplace sexual harassment), as well as their predictors/risk factors and mediators (what can increase or decrease their impact). The author also discusses work-related primary and secondary traumatic stress, and what she calls Complex Stress, which includes both Workplace Systemic Stress (job stress, burnout and sociocultural stressors) and Workplace Traumatic Stress. The author proposes that both situational (i.e., systemic) and individual factors contribute to Complex Stress. The book includes paper-and-pencil self-assessments of the various types of stress and of self-care practices. It also presents material on developing a personal wellness plan, and managing the effects of physical stress, anxiety, depression and substance abuse. Lastly, the author provides educational wellness material on the subjects of managing emotions, thoughts, behaviors, relationships, and on spirituality.

Fisher, P. (2001). *The manager's guide to stress, burnout and trauma in the corrections workplace.* Victoria, BC: Spectrum Press.

> This is a companion volume of the 2000 book *The road back to wellness: Workplace stress, burnout and trauma in corrections*. It addresses the topics of the prior book, only this time it presents them to managers and supervisors who are managing their subordinates while also needing to maintain their own well-being. In addition to the topics included in the prior volume, this book presents material on leadership, teamwork, and designing strategic interventions to counter workplace stress. These strategic interventions briefly address workplace health, individual employee health, and the health of the work-family interface.

Konda, S., Tiesman, H., Reichard, A., and Hartley, D. (2013). U.S. correctional officers killed or injured on the job. Corrections Today, November/December, 122-125.

> The authors collected data on work-related fatalities from the Census of Fatal Occupational Injuries for all 50 states and the District of Columbia from 1999 through 2008. They also gathered nonfatal injury data from the occupational supplement to the National Electronic Injury Surveillance System for the same time period. Leading events for correctional officer fatal and nonfatal work-related injuries were assaults and violent acts, transportation, and overexertion (nonfatal injuries). When compared to all U.S. workers, corrections officers were found to have one of the highest rates of nonfatal occupational injuries or illnesses, and the highest rate of occupational injuries due to assaults and violent acts, according to 2011 data reported by the Bureau of Labor Statistics. The most disturbing finding was that during that 10-year period, 17 corrections officers died from self-inflicted gunshot wounds that occurred in the workplace. The authors suggest that a national database be set up that provides details on information surrounding assaults on corrections officers, as is done for police officers, in order to enhance workplace violence prevention efforts and other safety training.

Lewis, K.R., Lewis, L.S., & Garby, T.M. (2013). Surviving the Trenches: The Personal Impact of the Job on Probation Officers. *American Journal of Criminal Justice, 38,* 67-84.

> This study aimed to assess traumatic stress and burnout in adult probation officers. A total of 309 probation officers from five agencies in three states completed several survey instruments including the Impact of Events Scale-Revised (which assesses for the presence of Post-traumatic Stress Disorder symptoms), the Compassion Satisfaction/Fatigue Self-Test for Helpers, and the

Probation Personal Impact Scale. Results suggested that officers who reported violent recidivism or sexual recidivism on their caseloads, offender suicide, and threats and/or assaults in the line of duty scored significantly higher on measures of traumatic stress and burnout than officers who did not experience these caseload events.

Spinaris, C.G., Denhof, M.D., & Kellaway, J.A. (2012). Posttraumatic Stress Disorder in United States Corrections Professionals: Prevalence and Impact on Health and Functioning.

Using a secure online application, a nationwide sample of corrections professionals (*N*=3599) serving in a wide variety of types of corrections settings and corrections disciplines completed the PTSD Checklist-Civilian Version (PCL-C), the Depression, Anxiety, Stress Scale-21 (DASS-21), the Impact on Functioning Scale (IOFS), and the Satisfaction with Life Scale (SWLS). Of the entire sample, 27% of the respondents met criteria for PTSD for symptoms experienced over the past 30 days. PTSD prevalence was significantly higher for males than females, a result which is the opposite of robust findings in the general population, where females are consistently found to have higher PTSD rates than males. PTSD prevalence was also higher for security/custody personnel than non-custody staff. The highest estimated PTSD rate—34%—was reported by male custody/security staff. Males and custody staff also reported higher exposure to workplace incidents of violence, injury and death than female and non-custody personnel. Compared to respondents who did not meet criteria for PTSD, PTSD-positive participants reported significantly: (1) more workplace exposure to violence, injury and death—greater total number of such events and more types of such events, (2) more negative emotions related to their exposure to incidents of violence, injury and death (indicative of more psychological distress in relation to these events), (3) higher levels of depression, anxiety, and stress, (4) more absenteeism, health services utilization, chronic health conditions, and use of alcohol and tobacco, (5) lower levels of pro-health behaviors (social activities and religious/spiritual activities), (6) lower levels of functioning in their professional and personal lives, and (7) lower levels of life satisfaction.
http://desertwaters.com/wp-content/uploads/2013/09/PTSD_Prev_in_Corrections_09-03-131.pdf

Stadnyk, B. L. (2003). PTSD in corrections employees in Saskatchewan.

A survey of 271 Canadian provincial corrections employees explored the relationship between PTSD symptoms, health and functioning. A large number of the employees surveyed (80%) reported having experienced a traumatic event in their workplace. The average number of violent events directly experienced over six months was almost three per employee. Using the Post-traumatic Diagnostic Scale (PDS) the author found a PTSD rate of 26% (for symptoms experienced over the past month), 16% of which was attributed to a work-related traumatic incident, and 10% to a non-work-related incident. Compared to study participants who did not meet PTSD criteria, the PTSD-positive group reported more absenteeism, poorer physical health, higher substance use (alcohol consumption), and decreased life satisfaction.
http://www.rpnas.com/wp-content/uploads/PTSDInCorrections.pdf

Webinar: The Corrections Profession: Maintaining Safety and Sanity. (Part 1.) National Institute of Corrections, 2014. Presenters: Spinaris, C.G., Denhof, M.D., & Morton, G.R. Desert Waters Correctional Outreach.

This program is the first of a two-part webinar, and covers the physical and emotional

challenges faced by correctional personnel. "The dangers correctional staff encounter on the job are well known to their leaders. A lesser known but possibly more hazardous set of factors involves the cumulative negative side effects of what staff experience through daily interactions with justice-involved individuals and immersion in uniquely challenging workplace conditions. Such side effects can be understood as examples of 'Corrections Fatigue.' The webinar will describe a process model developed and modified over several years by DWCO [Desert Waters Correctional Outreach], entitled 'From Corrections Fatigue to Fulfillment™.' Once Corrections Fatigue manifests, it can promote toxic adaptations to work demands, consequently undermining job performance, employee morale, health, personal and professional relationships, and employee retention." Objectives of this webinar are: describe types of occupational stress that may negatively impact the well-being of corrections staff; present the "umbrella" term of Corrections Fatigue, its nature, properties and consequences; and present research evidence that supports a model of Corrections Fatigue and its usefulness in providing interventions regarding increasing staff well-being. This download includes copies of the video, transcript, and presentation slides. [ANNOTATION FROM PUBLISHER]
http://nicic.gov/library/027907

Webinar: The Corrections Profession: Maintaining Safety and Sanity. (Part 2.) National Institute of Corrections, 2014. Presenters: Spinaris, C.G., Denhof, M.D., & Morton, G.R. Desert Waters Correctional Outreach.

This program is the second of a two-part webinar, and covers the physical and emotional challenges faced by correctional personnel. "The dangers correctional staff encounter on the job are well known to their leaders. A lesser known but possibly more hazardous set of factors involves the cumulative negative side effects of what staff experience through daily interactions with justice-involved individuals and immersion in uniquely challenging workplace conditions. Such side effects can be understood as examples of 'Corrections Fatigue.' The webinar will describe a process model developed and modified over several years by DWCO [Desert Waters Correctional Outreach], entitled 'From Corrections Fatigue to Fulfillment™.' Once Corrections Fatigue manifests, it can promote toxic adaptations to work demands, consequently undermining job performance, employee morale, health, personal and professional relationships, and employee retention." Objectives of this webinar are: describe the concept of Corrections Fulfillment; present the basics of a data-driven, evidence-based approach to addressing Corrections Fatigue; and present corrections-specific resources to address Corrections Fatigue and promote Corrections Fulfillment. [ANNOTATION FROM PUBLISHER]
http://nicic.gov/library/027908

Depression in Corrections Professionals

David S., Landre M.F., Goldberg M., Dassa S., & Fuhrer R**.** (1996). Work Conditions and Mental Health among Prison Staff in France. *Scandinavian Journal of Work Environmental Health*, *22*, 45-54.

> The authors conducted a study of 3,474 men and 1,113 women prison staff in France. Of the entire sample, 24% met diagnostic criteria for depression. About 25% of the men and 21.4% of the women presented depressive symptoms that became considerably more marked with age, pointing to cumulative negative effects of prison work. The depression incidence rate was considerably higher than for the general population. Of the men 22% and of the women 37% reported suffering from anxiety, with the overall anxiety rate being 25%, and with 42% of the entire sample reporting recurring sleep disorders. Seniority was associated with depressive symptoms and anxiety among the men, again pointing to cumulative effects instead of increasing resilience over time.

Denhof, M.D. (2014). The Depression Danger Scale (DDS).

> The Depression Danger scale (DDS) is a psychometrically sound assessment tool that serves the purpose of gauging organization-wide suicide risk by comparing a group's average DDS score to a national average score for corrections professionals. The DDS consists of question items that reflect risk factors for severe depression and suicide. The instrument represents a useful means of monitoring the health status of a workforce periodically over time and to prompt intervention efforts as needed.
> http://desertwaters.com/wp-content/uploads/2014/01/DDS_Data_Sheet.pdf

Denhof, M.D., & Spinaris, C.G. (2013). Depression, PTSD, and Comorbidity in United States Corrections Professionals: Impact on Health and Functioning.

> This study estimated prevalence rates for depression, PTSD, and co-occurring (comorbid) PTSD and depression in corrections professionals. The study also explored the relationship between particular disorder conditions and a variety of variables including job type and several indices of health, well-being, and life functioning. A large number of variables were also assessed for their ability to replicate diagnoses and classifications of PTSD, depression, and comorbid PTSD/depression coming from established clinical assessment and screening tools. Using a secure online application, a nationwide sample of corrections professionals (*N*=3599) completed the PTSD Checklist-Civilian Version (PCL-C), the Depression, Anxiety, Stress Scale-21 (DASS-21), the Impact on Functioning Scale (IOFS), and the Satisfaction with Life Scale (SWLS). Participants responded to additional questions regarding their exposure to a variety of types of traumatic workplace events and related emotions, and health-related conditions, behaviors, and functional impairments. Results indicated rates of depression, PTSD, and comorbid PTSD/depression that far exceed general population and military veteran population rates. Among all participants in the sample found to be Depression+ (*n*=925), 67% of them were also found to be PTSD+. Among those who were found to be PTSD+ (*n*=956), 65% were also found to be Depression+. Males and individuals in security/custody roles demonstrated the highest disorder rates. The condition of comorbid PTSD/depression (met by 17% of the sample) demonstrated a particularly strong relationship to worse outcomes and statuses on a large number of variables reflecting health and functioning. Parsimonious sets of public domain assessment items were identified that offer promise as screening items for determining the prevalence of common disorder conditions in corrections professional populations.
> http://desertwaters.com/wp-content/uploads/2013/09/Comorbidity_Study_09-03-131.pdf

Obidoa, C., Reeves, D., Warren, N., Reisine, S., & Cherniack, M. (2011). Depression and Work-Family Conflict among Corrections Officers. *Journal of Occupational and Environmental Medicine, 53,* 1294-1301.

> The researchers examined the incidence of depression and its relationship to work-to-family conflict, family-to-work conflict, and sense of coherence in a sample of 220 corrections officers at two State prisons in the Northeastern United States. About a third of the sample (31%) scored in the range of serious psychological distress (depression), which is about three times the rate for the adult general population. The work-to-family conflict was found to be more pronounced than family-to-work conflict, with work-related stress contributed to depression by spilling over to the officers' home lives. Sense of coherence was found to reduce the work-to-family conflict and the family-to-work conflict, and also the depression ratings. (Sense of coherence was defined as the reported frequency of finding solutions to difficult problems, thinking what happens on a daily basis in life makes sense, and perceiving daily life as a source of personal satisfaction.)

Samak, Q. (2003). Correctional Officers of CSC and their working conditions: a questionnaire-based study.

> This survey of 2,432 Canadian federal corrections officers reported negative impact of work-related stress on the officers' physical and psychological health, and private lives. Several measures of work-related stress were found to increase with the corrections officers' years of service, with them becoming more negatively affected as their years on the job increased. That is, instead of officers becoming more resilient and more adept at dealing with work-related stressors over time, their coping capabilities decreased. Almost a quarter of the survey participants reported having been diagnosed with depression in the last 10 years, and reported incidence of depression increased with years of service. Reported depression rates were significantly higher among corrections officers than in the general population, and proportionately higher for male corrections officers compared to women corrections officers than for men compared to women in the general population or in other job categories. Work-related stress factors in the institutions were found to increase significantly with inmate capacity.
> http://www.ucco-sacc.csn.qc.ca/Documents/UCCO-SACC/National/documents/Research/Correctional%20Officers%20and%20their%20working%20conditions.pdf

Corrections Officer Suicide

New Jersey Police Suicide Task Force Report. (2009).
> The New Jersey Police Suicide Task Force reported finding that for the years 2003-2007, for men aged 25-64 years, the suicide rate was 14 per 100,000. (For the total population, the suicide rate was 6.2 per 100,000.) For male police officers aged 25-64 years, the suicide rate was 15.1 per 100,000. For male corrections officers aged 25-64 years, the suicide rate for that same time period was more than double that of the police officers—34.8 per 100,000. More than 80% of the law enforcement suicides were committed with a firearm (vs. one-third for similarly aged males in the general population). Most of the suicides seemed to be the result of an acute, recent crisis. Occupational stress and access to firearms were implicated as contributing to the high suicide rates.
> http://www.state.nj.us/lps/library/NJPoliceSuicideTaskForceReport-January-30-2009-Final(r2.3.09).pdf

Stack, S.J, & Tsoudis, O. Suicide risk among correctional officers: A logistic regression analysis. Archives of Suicide Research, 1997, 3, 183-186.
> This is the only study to date that examines corrections officer suicide rates on a national level. Using the 1990 National Mortality Detail File (U.S. Public Health Service, 1994), the researchers investigated corrections officer suicide rates by examining the death certificates from 21 states that reported occupation of the deceased. They found that 7.14% of all corrections officers' deaths were attributed to suicide, as opposed to 4.5% of deaths from all other occupations being due to suicide. Controlling for marital status, gender, age, race, and educational status, a multivariate logistic regression analysis showed that corrections officers are at 39% higher risk of death from suicide (vs. other causes) than that of the rest of the working age population.

Health Issues of Corrections Professionals

Bierie, D. (2012). The Impact of Prison Conditions on Staff Well-Being. *International Journal of Offender Therapy and Comparative Criminology, 56,* 81–95.

> This study illustrates the effects of operational stressors on corrections staff well-being. The author examined whether immersion in harsh physical environmental conditions in prisons impact employee health and overall well-being, which in turn might affect work performance. A questionnaire was administered in 2007 to a representative random sample of employees at all 114 facilities of the Federal Bureau of Prisons. The final sample was composed of 1,738 employees. The questionnaire asked about staff perceptions of the presence of harsh physical conditions at the prisons, such as intrusive noise levels, cluttered or dirty space, and lack of inmate privacy in the units. It also asked questions about physical symptoms, such as recurrent headaches, back problems and disturbed sleep; and psychological symptoms, such as depression, worry, and anger. Questions were also asked about sick leave use, alcohol use and tobacco use. Results showed that harsher physical environmental conditions were associated with higher sick leave use, numerous psychological and physical symptoms, and higher substance use. It is noteworthy that reduced employee physical and psychological well-being was reported not only when staff themselves perceived their workplace conditions to be harsh, but also when they themselves did not rate the prison environment as harsh, but the average rating for that prison was that physical conditions there were harsh. This indicates that staff are being adversely affected physically and psychologically even when they themselves do not perceive their physical working environment to be harsh.

Morse, T., Dussetschleger, J., Warren, N., & Cherniack, M. (2011). Talking About Health: Correction Employees' Assessments of Obstacles to Healthy Living. *Journal of Occupational and Environmental Medicine, 53,* 1037-1045.

> These researchers studied 335 corrections officers working at two State prisons in a northeastern state. This sample had higher overweight and obesity levels and higher hypertension rates than the national averages, with 62% of the women and 56% of the men being in the obese category. Obesity increased with job tenure (years on the job, indicating a cumulative detrimental effect), male gender, and shift work. Participants reported the following sources of occupational stress: safety concerns, administrative requirements, and stresses on their home life due to work/family imbalance because of shift work and overtime. Hypertension was thought to be due to staff stress. Of the sample, 40% reported being emotionally drained after work, and 44% reported feeling worn out and weary after work. On the other hand, study participants reported engaging in weekly physical exercise at a rate higher than the national average.

Operational Stress, Organizational Stress and Burnout in Corrections Professionals

Brower, J. (2013). Correctional Officer Wellness and Safety Literature Review. Sponsored by the US Dept. of Justice, Office of Justice Programs.

> This literature review by the Office of Justice Programs (OJP) Diagnostic Center discusses research that examined the causes and effects of stress for correctional officers (COs) and describes the available research on correctional officer wellness programs. The review indicates that there are four different categories of stressors for COs: inmate-related, occupational (inherent to the profession), organizational/administrative; and psycho-social. These stressors pose a serious threat to the health and well-being of COs, and, if not properly managed, can lead to significant health problems and an increased risk for serious psychological distress, emotional disorders, and an elevated risk for suicide. This review has three primary sections. The first section describes the major stressors for COs, as well as the effects of the stressors. The second section is an extensive examination of CO stress management and wellness programs, while the third section is a discussion of common themes identified in the review of the programs. [ABSTRACT FROM PUBLISHER]
> https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=266912

Crawley, E.M. (2004). *Doing prison work: The public and private lives of prison officers.* (2004). Cullompton: Willan Publishing.

> The author interviewed prison officers in six male prisons over the span of two years. She also interviewed the officers' partners and children. Chapter titles include: Setting the scene: the research in context; Research methods; Learning the rules, managing feelings: becoming a prison officer; Them and us? How officers see prisoners; Emotion and performance: the presentation of self in prisons; When things go wrong: suicide and conflict; How prison officers see their work, themselves and each other; and Bringing it all back home? Stories of husbands and wives.

Denhof, M.D., & Spinaris, C.G. (2014). The Corrections Fatigue Status Assessment (CFSA-v5).

> The Corrections Fatigue Status Assessment (CFSA-v5), now in its fifth version, is a scientifically-developed assessment tool that allows for the reliable and valid measurement of the overall health and functioning of a corrections workplace culture. This assessment instrument provides objective scores in nine key areas: Behavioral Functioning, Outlook/Disposition, Leader Supportiveness, Psychological Safety, Staff Reliability, Moral Injury, Morale, Staff Supportiveness, and Meaning. Scores from individual content areas have a variety of uses, such as monitoring workforce status and pre/post assessment of intervention effectiveness.
> http://desertwaters.com/wp-content/uploads/2014/01/CFSA_V4_Data_Sheet.pdf

Dollard, M.F. & Winefield, A.H., (1998). A test of the demand-control/support model of work stress in corrections officers. *Journal of Occupational Health Psychology*, *3*, 243-26.

> These researchers studied a sample of 419 Australian correctional officers. They found that job posts characterized by high demands, low control, and low social support were associated with strain symptoms, such as psychological distress, job dissatisfaction and negative affectivity. (Negative affectivity refers to the experience of negative emotions and the display of a negative

outlook.) On the contrary, high-demands and high-control jobs were associated with positive behavioral outcomes, such as seeking feedback and perceiving work problems to be a challenge to overcome. Corrections officers in high-isolation and high-strain jobs with the longest years of service showed higher levels of strain and higher negative affectivity than workers working in the same job for a shorter amount of time. The researchers suggested that, over time, negative work experiences shape staff's personality due to the psychological distress experienced, causing them to have a more negative outlook.

Dowden, C., Tellier, C. (2004). Predicting Work-Related Stress in Correctional Officers: A Meta-Analysis. Journal of Criminal Justice, 32, 31-47.

This review of 20 studies examined the predictors of job stress in corrections officers. The strongest predictors of job stress were degree of participation in decision-making, job satisfaction, commitment, turnover intention, perceived dangerousness of the job, and role difficulties. Both favorable corrections officer attitudes (human service/rehabilitation orientation and counseling) and unfavorable corrections officer attitudes (punitiveness, custody orientation, social distance, and corruption) moderately related to job stress, with results differing with the country of study (Canada or U.S.A.).

Finn, P. (2000). *Addressing corrections officer stress: Programs and strategies.* (NIJ Publication No : NCJ 183474). Washington, D.C.: US. Government Printing Office.

This publication describes seven programs in seven states designed to address corrections officer stressors, such as actual and threatened inmate violence, short staffing, mandatory overtime, shift work, staff interpersonal conflict, low pay, and a poor public image. The programs presented were either in-house, external or hybrids. They included professional counseling to staff and their families, peer support, critical incident response services, post-trauma services, and related trainings. The author recommended that the following ingredients be included in stress reduction programs for corrections staff: (1) Appointing talented and dedicated staff who can withstand the stress of helping others; (2) Earning the buy-in of decision makers (administrators and union officials), line staff and their families; (3) Offering confidential programs and a wide variety of appropriate services; (4) Training supervisors to identify and approach staff who may be experiencing psychological difficulties due to stress; (5) Positively impacting the workplace culture to reduce some causes of stress; and (6) Monitoring stress reduction and cost savings program activities and evaluating their effectiveness on an ongoing basis.
https://www.ncjrs.gov/pdffiles1/nij/183474.pdf

Finn, P., & Kuck, S. (2003). Addressing Probation and Parole Officer Stress. U.S. Department of Justice. Document No. 207012.

"*Addressing Probation and Parole Officer Stress* is intended to help probation and parole agency administrators develop an effective program for preventing and treating stress among officers. The report strongly recommends that administrators provide the same stress services to support staff—and to the families of officers and support staff" (p. 1). The authors describe nine Stress Program case studies in nine jurisdictions/states.
https://www.ncjrs.gov/pdffiles1/nij/grants/207012.pdf

Finney, C., Stergiopoulos, E., Hensel, J., Bonato, S. and Dewa, S. S. (2013). Organizational stressors associated with job stress and burnout in correctional officers: a systematic review. BMC Public Health, 13:82.

> A systematic search of the literature on corrections officer occupational stress and burnout was conducted. Eight studies met all inclusion and quality assessment criteria. Five categories of organizational stressors among corrections officers working in adult correctional facilities were examined: stressors intrinsic to the job, role in the organization, rewards at work, supervisory relationships at work and the organizational structure and climate. Of these, organizational structure and climate were found to be most consistently related to corrections officers' job stress and burnout. Organizational structure and climate included organizational support, organizational justice, policies, authority, and ability to participate in decision-making. The authors concluded that that systemic interventions should focus on improving the organizational structure and climate of the correctional facilities, and that this would best be done by improving communication between management and corrections officers.
> http://www.biomedcentral.com/1471-2458/13/82

Griffin, M.L., Hogan, N.L. & Lambert, E.G. (2012). Doing "People Work" in the Prison Setting: Examination of the Job Characteristics Model and Correctional Staff Burnout. *Criminal Justice and Behavior, 39,* 1131-1148.

> The authors surveyed a sample of corrections staff *(N=160)* at a private prison to examine the effects of job characteristics on burnout. The job characteristics studied were supervision consideration, supervision structure, job autonomy, and job variety. All three dimensions of burnout were examined: emotional exhaustion, depersonalization (negative attitudes and behaviors toward coworkers and offenders), and perceived ineffectiveness at work. The results indicated that job autonomy and job variety had significant negative relationships with emotional exhaustion. That is, the greater the reported job autonomy and the job variety, the lower the staff's reported emotional exhaustion. Supervision consideration, job autonomy, and job variety all had negative effects on the depersonalization dimension of burnout. That is, these job characteristics were associated with lower reported depersonalization. Job autonomy and job variety had significant negative effects on perceived ineffectiveness, indicating that as job autonomy and job variety increased, reported perceived ineffectiveness decreased. Of all the job characteristics studied, job autonomy (degree of freedom to make job-related decisions) and job variety (degree of variation of job-related experiences and tasks) were the most strongly associated with lower burnout scores.

Keinan, G., & Malach-Pines, A. (2007). Stress and Burnout among Prison Personnel: Sources, Outcomes, and Intervention Strategies. *Criminal Justice and Behavior, 34,* 380-398.

> This study of a representative sample of 496 Israel Prison Service employees used group questionnaires and in-depth interviews to assess types of stressors affecting the staff, and their outcomes. The most stressful factors were working additional shifts without compensation, low salary, high workloads, and slow promotions. There were significant differences by job category in the reported severity of stressors. Compared to administrative staff and treatment staff, security staff reported as greater concerns the possibility of being injured by an inmate and the possibility that their family members might be harmed by inmates. Reported stress levels were higher for men compared to women employees, for security staff, for lower ranking staff, and for staff with more years on the job. More burnout and more physical and psychological symptoms, including posttraumatic symptoms, were reported by security staff, lower ranking

staff, older staff, and staff with less years of education. Work satisfaction was higher for administrative staff compared to security and treatment staff, which did not differ from one another. A comparison with a sample of police officers indicated that prison employees reported significantly more stress and burnout than police officers.

Schaufeli, W.B. and Peeters, M.C.W. (2000). Job Stress and Burnout among Correctional Officers: A Literature Review. *International Journal of Stress Management, 7,* 19-48.

> This literature review of 43 research studies from nine countries identified two potentially life-endangering stressors for corrections officers working in correctional facilities: the threat of violent confrontations between corrections officers and offenders, and overall danger (including the danger of contracting communicable diseases through dealings with offenders). The most notable stressors for corrections officers were found to be role problems, work overload, demanding social contacts (with offenders, colleagues, and supervisors), and poor social status. Based on the articles reviewed, the authors concluded that the most effective ways to address occupational stress among corrections officers is to promote organizational strategies, such as improving human resources management, professionalization of the corrections officers' job, and improvement of their social work environment.

Summerlin, Z., Oehme, K., Stern, N., & Valentine, C. (2010). Disparate levels of stress in police and correctional officers: preliminary evidence from a pilot study on domestic violence*. Journal of Human Behavior in the Social Environment, 20,* 762-777.

> Pilot survey data from a prevention curriculum project for officer-involved domestic violence in a southeastern state indicated that reported job stress was significantly higher for corrections officers than for police officers. Corrections officers also reported significantly higher levels of organizational stress, especially in relation to staff and resource shortages and attitudes about leadership. The significant differences in reported job stress and organizational stress between corrections officers and police officers had not been predicted by the researchers. In retrospect, the researchers hypothesized that the higher stress of corrections officers might be associated with budget cuts, hiring freezes, and layoffs experienced by the Department of Corrections in that state in the prior year.

Traumatic Stress and Post-traumatic Stress Disorder

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders (DSM-5) (Fifth Ed.)*. Washington D.C.: American Psychiatric Association.

>According to the fifth edition of the *Diagnostic and Statistical Manual for Mental Disorders* (DSM-5), both direct traumatic exposure (first-hand, through experiencing or witnessing a traumatic stressor oneself) and indirect traumatic exposure (second hand, through learning about a traumatic stressor by hearing, reading or viewing information) can lead to the development of Post-traumatic Stress Disorder. The DSM-5 defines as "traumatic" any event which involves either direct or indirect exposure to actual or threatened serious injury or actual or threatened sexual violence or death. It lists the following categories of traumatic stress: (a) being assaulted oneself, (b) directly witnessing actual or threatened serious injury, sexual violence, or death of another person, (c) learning (being exposed second hand or indirectly) that any of the above types of events were suffered by a close family member or friend, or (d) being extremely or repeatedly exposed to aversive details of traumatic events as part of professionals' vocational role. The DSM-5 states that professionals, such as first responders, may be traumatized even by exposure through electronic media, television, movies, or pictures. Symptoms of PTSD, according to the DSM-5 are: recurrent, involuntary and distressing intrusions (such as remembering, dreams or flashbacks); avoidance of traumatic reminders, whether internal reminders (such as thoughts or feelings) or external reminders (such as people or places); negative changes in cognitions (such as negative beliefs about oneself, others or the world) and mood (such as persistent negative emotions or feeling detached from others), and changes in physiological arousal and reactivity (such as angry outbursts or sleep disturbances).

Diamond, G.M., Fajerman, Z., Lipsitz, J.D., & Rozenblat, O. (2010). Ongoing Traumatic Stress Response (OTSR) in Sderot, Israel. *Professional Psychology: Research and Practice, 41,* 19-25.

>Researchers studied the development and nature of anxiety symptoms of residents of an Israeli city exposed to years of war-related traumatic stress due to missile attacks. For one group of residents the beginning and progress of symptoms were related to experiencing one life-threatening incident, and were typical of the clinical presentation of PTSD. For a second group, however, anxiety symptoms were associated with reasonable fear regarding anticipated future exposure to danger. This second group's symptoms tended to be reduced significantly or completely in the case of moving to another city, away from missile attacks. For this second group, the treatment that proved to be most helpful was developing coping strategies for dealing with ongoing and future life-threatening circumstances, and managing anxiety symptoms. For the first group, traditional trauma-resolution techniques were the most appropriate. The researchers concluded that since this second group did not meet criteria for PTSD, an alternative diagnosis—Ongoing Traumatic Stress Response (OTSR)—was more appropriate, with the two conditions of PTSD and OTSR possibly co-occurring and interacting at times.

Hruska, B., Fallon, W., Spoonster, E., Sledjeski, E. M., & Delahanty, D. L. (2011). Alcohol use disorder history moderates the relationship between avoidance coping and posttraumatic stress symptoms. *Psychology of Addictive Behaviors.* Advance online publication. doi: 10.1037/a0022439.

>The researchers explored whether individuals with pre-existing Alcohol Use Disorder and who engaged in avoidance coping behaviors would be more at risk for developing PTSD after exposure to a traumatic event. Their results supported this hypothesis, indicating that alcohol

consumption may be used as an avoidance coping strategy for individuals who experienced a traumatic event. The authors concluded that avoidance coping behaviors may be a risk factor for the development of comorbid (co-existing) posttraumatic stress and alcohol abuse. They recommended early assessment of alcohol abuse and avoidance coping behaviors to identify those at risk for developing PTSD. They also recommended the implementation of interventions to reduce avoidance coping behaviors soon after a traumatic exposure, in order to help reduce the risk of developing PTSD.

Kolassa, I.-T., Ertl, V., Eckart, C., Kolassa, S., Onyut, L.P., & Elbert, T. (2010). Spontaneous remission from PTSD depends on the number of traumatic event types experienced. *Psychological Trauma: Theory, Research, Practice, and Policy, 2*, 169–174.

> These authors studied Rwandan genocide survivors in refugee camps to assess the effects of exposure to a diverse range of types of traumatic events. The refugees had received no treatment for psychological disorders, so the researchers were able to study the rate of spontaneous PTSD symptom remission (reduction/recovery) over time. They found that as exposure to *different types* of traumatic events increased, so did the prevalence, severity and chronicity of PTSD symptoms. That is, the larger the number of different types of traumatic events people had been exposed to, the more likely they were to suffer from severe PTSD, and the less likely they were to experience spontaneous remission from PTSD. In fact, Kolassa et al. estimated that each additional traumatic event type experienced was associated with an 8% lower chance of spontaneous remission from PTSD.

Kendall-Tackett, K. (2009). Psychological trauma and physical health: A psychoneuroimmunology approach to etiology of negative health effects and possible interventions. *Psychological Trauma: Theory, Research, Practice, and Policy, 1*, 35–48.

> The author reviewed research which indicated that, compared to the general population, survivors of traumatic events have higher rates of a wide range of serious illnesses, such as cardiovascular disease, diabetes, gastrointestinal disorders, and cancer**.** The literature reviewed suggested that this may be the result of two factors: (1) dysregulation of the hypothalamic-pituitary-adrenal axis and sympathetic nervous system, and (2) dysregulation of the inflammatory response.

Kroes, M.C. W., Rugg, M.D., Whalley, M.G., & Brewin, C.R. (2011). Structural brain abnormalities common to posttraumatic stress disorder and depression. *Journal of Psychiatry & Neuroscience, 36*, 256–265.

> The volume in different brain areas was studied for three groups of individuals: (1) a group diagnosed with Major Depressive Disorder, (2) a group diagnosed with PTSD (with or without coexisting Major Depressive Disorder), and (3) a non-symptomatic group that had been exposed to trauma. Using structural magnetic resonance imaging scans, it was found that those diagnosed with PTSD and Major Depressive Disorder (but not the non-symptomatic controls) exhibited similar reductions in certain brain areas, especially in the prefrontal cortex. Higher self-reported anxiety, and also higher self-reported depression, were additionally associated in distinct ways with brain volume changes in the case of PTSD versus Major Depressive Disorder.

Lancaster, S.L., Melka, S.E., & Rodriguez, B.F. (2011). Emotional Predictors of PTSD Symptoms. *Psychological Trauma: Theory, Research, Practice, and Policy.* DOI: 10.1037/a0022751.

> Researchers asked 341 undergraduate students who were trauma survivors to retrospectively report their emotional experiences at the time of their exposure to a traumatic event. Reported emotions of anger, sadness, and disgust were significant predictors of PTSD scores, with anger consistently emerging as a predictor. Gender differences were noted, with anger and guilt predicting level of PTSD symptoms for men, and anger, disgust and sadness predicting level of PTSD symptoms for women. Ethnic differences were noted as well, with only anger predicting PTSD symptom level in African-Americans, whereas anger, guilt, helplessness, and disgust predicted PTSD symptom level in European-Americans.

Marshall, R.D., Olfson, M., Hellman, F., Blanco, C., Guardino, M., & Struening, E.L. (2001). Comorbidity, Impairment, and Suicidality in Subthreshold PTSD. *American Journal of Psychiatry, 158,* 1467-1473.

> The authors found that trauma-exposed individuals who met some but not all criteria for PTSD (said to be suffering from partial PTSD, also known as subthreshold or subsyndromal PTSD) still experienced significant distress, impairment and other co-occurring (comorbid) disorders. PTSD symptoms and resulting impairments were found to occur on a continuum. Partial PTSD significantly raised the risk of suicidal thoughts, generalized anxiety, major depressive disorder, panic, and obsessive-compulsive disorder*,* and was associated also with impairments in functioning*.* The authors concluded that even after controlling for demographic variables, partial PTSD was found to make independent and statistically significant contributions to impairment, similar to but less than that of full PTSD. They concluded that significantly larger numbers of people exposed to traumatic events experience substantial functioning impairment and health conditions than would be estimated by simply considering the rates of full PTSD.

Ozer, E.J., Best, S.R., Lipsey, T.L, & Weiss, D.S. (2003). Predictors of Posttraumatic Stress Disorder and Symptoms in Adults: A Meta-Analysis. *Psychological Bulletin, 129,* 52–73.

> The authors analyzed the results of 68 studies to assess the contribution of the following seven predictors to the development of PTSD symptoms and a PTSD diagnosis: (a) prior trauma, (b) prior psychological adjustment, (c) family history of psychopathology, (d) perceived life threat during the trauma, (e) post-trauma social support, (f) peritraumatic emotional responses (emotions experienced while the traumatic exposure was occurring), and (g) peritraumatic dissociation (dissociation occurring during the traumatic incident). All seven factors yielded significant effect sizes, with family history, prior trauma, and prior psychological adjustment effects being the smallest, and peritraumatic dissociation effects being the largest. The authors concluded that psychological processes that occur around the time of the trauma (the subjective psychological experience of and response to traumatic exposure) contribute more to the development of PTSD symptoms and are the strongest predictors of PTSD, than prior characteristics. Lower post-trauma social support was a stronger predictor of PTSD when the trauma experienced was combat than other types of trauma.

Pietrzak, R.H., Goldstein, R.B., Southwick, S.M., & Grant, B.F. (2011). Prevalence and Axis I Comorbidity of Full and Partial Posttraumatic Stress Disorder in the United States: Results from Wave 2 of the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Anxiety Disorders, 25,* 456-465.

Using data from a nationally representative sample of U.S. adults, the Wave 2 National Epidemiologic Survey on Alcohol and Related Conditions *(N=34,653),* lifetime rates examined for psychiatric illnesses that co-occur with PTSD and partial PTSD. Lifetime prevalences of PTSD and partial PTSD were 6.4% and 6.6%, respectively. PTSD rates were comparable to those observed in previous epidemiologic surveys. Both PTSD and partial PTSD were associated with elevated lifetime rates of mood, anxiety, and substance use disorders, and suicide attempts. Respondents with partial PTSD generally had intermediate odds of co-occurring psychiatric disorders and psychosocial impairment relative to trauma controls and full PTSD. Rates of PTSD and partial PTSD were higher among women (8.6% and 8.6%) than men (4.1% and 4.5%), again in agreement with prior studies of the general population. Respondents with PTSD or partial PTSD most commonly reported unexpected death of someone close, serious illness or injury to someone close, and sexual assault as their worst stressful experiences. Direct traumatic exposure resulted in more severe and longer-lasting symptoms than indirect traumatic exposure. PTSD lasted, on average, 11.2 years and partial PTSD 10 years. However, 46% of affected respondents reported remission (that is, reduction or disappearance of symptoms).

Rogers, K.-A., & Kelloway, E. K. (1997). Violence at Work: Personal and Organizational Outcomes. *Journal of Occupational Health Psychology, 2,* 63-71.

A study of bank tellers found that fear of future violence on the job was the outcome of prior exposure to workplace violence. Exposure to workplace violence, and fear of future violence predicted psychological well-being, somatic symptoms (sleep disturbances, headaches and digestive problems), and intent to leave the organization. Turnover intentions were predicted by fear (the urge to leave a setting that was perceived to be life-threatening), even when employees had a strong commitment to the organization. Both the actual (directly witnessed) and the indirect experience of workplace violence (hearing about an incident from other employees) affected staff similarly, as they both resulted in employees becoming fearful. Thus learning about workplace violence can have similar detrimental effects on staff as being directly exposed to workplace violence, due to growing fears about their own safety.

Sareen, J., Cox, B. J., Stein, M. B., Afifi, T .O, Fleet, C., & Asmundson, G. J. G. (2007). Physical and Mental Comorbidity, Disability, and Suicidal Behavior Associated with Posttraumatic Stress Disorder in a Large Community Sample. *Psychosomatic Medicine, 69*, 242–248.

Using data came from the Canadian Community Health Survey Cycle 1.2 *(N=36,984)* the researchers established that PTSD was significantly associated with cardiovascular diseases, respiratory diseases, chronic pain conditions, gastrointestinal illnesses, and cancer. After controlling for demographic factors, mental disorders, and severity of physical disorders, PTSD was associated with suicide attempts, poor quality of life, and both short- and long-term disability. Early recognition and treatment of PTSD would reduce costs on many levels, as well human suffering.

Traumatic Stress and PTSD in High-trauma Occupations

Campbell, D.G., Felker, B.L., Liu, C.F., Yano, E.M., Kirchner, J.E., Chan, D., Rubenstein, L.V., Chaney. E.F. (2007). Prevalence of depression-PTSD comorbidity: implications for clinical practice guidelines and primary care-based interventions. *Journal of General Internal Medicine, 22,* 711-718.

> BACKGROUND: Compared to those with depression alone, depressed patients with posttraumatic stress disorder (PTSD) experience more severe psychiatric symptomatology and factors that complicate treatment. OBJECTIVE: To estimate PTSD prevalence among depressed military veteran primary care patients and compare demographic/illness characteristics of PTSD screen-positive depressed patients (MDD-PTSD+) to those with depression alone (MDD). DESIGN: Cross-sectional comparison of MDD patients versus MDD-PTSD+ patients. PARTICIPANTS: Six hundred seventy-seven randomly sampled depressed patients with at least 1 primary care visit in the previous 12 months. Participants composed the baseline sample of a group randomized trial of collaborative care for depression in 10 VA primary care practices in 5 states. MEASUREMENTS: The Patient Health Questionnaire-9 assessed MDD. Probable PTSD was defined as a Primary Care PTSD Screen > or = 3. Regression-based techniques compared MDD and MDD-PTSD+ patients on demographic/illness characteristics. RESULTS: Thirty-six percent of depressed patients screened positive for PTSD. Adjusting for socio-demographic differences and physical illness comorbidity, MDD-PTSD+ patients reported more severe depression (P < .001), lower social support (P < .001), more frequent outpatient health care visits (P < .001), and were more likely to report suicidal ideation (P < .001) than MDD patients. No differences were observed in alcohol consumption, self-reported general health, and physical illness comorbidity. CONCLUSIONS: PTSD is more common among depressed primary care patients than previously thought. Comorbid PTSD among depressed patients is associated with increased illness burden, poorer prognosis, and delayed response to depression treatment. Providers should consider recommending psychotherapeutic interventions for depressed patients with PTSD. [ABSTRACT FROM PUBLISHER]

Corneil, W., Beaton, R., Murphy, S., Johnson, C., & Pike, K. (1999). Exposure to Traumatic Incidents and Prevalence of Posttraumatic Stress Symptomatology in Urban Firefighters in Two Countries. *Journal of Occupational Health Psychology, 4*, 131-141.

> The researchers assessed and compared work-related PTSD symptoms in urban firefighters in the U.S. and in Canada. High prevalence (22% and 17% respectively) was reported in both samples. High levels of work social support and family social support were associated with a significantly lower risk of PTSD. On the other hand, high levels of work strain (organizational and administrative stressors) were associated with a significantly higher risk for PTSD in both U.S. and Canadian firefighter samples. These findings indicate that the negative impact of exposure to traumatic events can be lessened by social support both at work and at home. On the contrary, negative working conditions (organizational and administrative stressors), can aggravate the effects of exposure to traumatic incidents, thus increasing the risk for developing PTSD.

Cukor, J., Wyka, K., Jayasinghe, N., Weathers, F., Giosan, C., Leck, P., Roberts, J., Spielman, L., Crane, M., & Difede, J. (2011). Prevalence and predictors of posttraumatic stress symptoms in utility workers deployed to the World Trade Center following the attacks of September 11, 2001. *Depression and Anxiety*, *28*, 210–217.

A study of utility workers deployed to the World Trade Center site in the aftermath of 9/11 found that those who perceived their lives to be in danger were twice as likely to report symptoms consistent with a diagnosis of PTSD as the overall sample. Of the individuals with probable PTSD, 51% had neither a psychiatric history nor a trauma history that preceded 9/11. Extent of traumatic exposure related to their work at the World Trade Center site predicted 89% of PTSD cases in those without a psychiatric or trauma history, but only 67% of cases among those with both. Eight percent of participants had symptoms consistent with full PTSD, 9.3% with partial PTSD, 6.0% with Major Depressive Disorder, 3.5% with Generalized Anxiety Disorder, and 2.5% with Panic Disorder.

Erickson, D.J., Wolfe, J., King, D.W., King, L.A., & Sharkansky, E.J. (2001). Posttraumatic stress disorder and depression symptomatology in a sample of Gulf War Veterans: A prospective analysis. *Journal of Consulting and Clinical Psychology, 69*, 41-49.

The authors assessed a sample of Gulf War veterans *(N=2,949)* on two different occasions for the presence of depression and PTSD, and for the timeline of the development of these two conditions in cases where they co-occurred. Development of depression was found to precede PTSD in some cases, but development of PTSD at times preceded depression. When three PTSD cluster symptoms were examined separately (the symptom clusters of reexperiencing, avoidance-numbing, and hyperarousal), it was found that reexperiencing and avoidance-numbing could develop either before or after depression symptoms. However, hyperarousal symptoms, always preceded the development of depression symptoms later on; their development never occurred following the onset of depression.

Friedman, M. & Higson-Smith, C. Building Psychological Resilience: Learning from the South African Police Service. (2003). In D. Paton, J.M. Violanti & L.M. Smith (Eds.), *Promoting Capabilities to Manage Posttraumatic Stress: Perspectives on Resilience*. Springfield, Illinois: Charles C Thomas.

In their examination of factors that foster resilience in high-trauma occupations (such as the military or police) that expose employees to the occupational hazard of inevitable, repeated and anticipated trauma, the authors introduce the concept of negative resilience as a counterfeit of true resilience. They propose that, following exposure to a work-related traumatic incident, some officers may exhibit a peak of traumatic symptoms, but then appear to continue performing their duties in a satisfactory manner, seemingly unaffected by the prior traumatic exposure. However, the authors suggest that this seemingly effective adaptation is based on dissociation, emotional numbing, and denial of existing distress. Consequently, after a period of time of continual repeated exposure, these individuals may reach a second peak of traumatic symptoms, possibly with incapacitating symptoms of a psychological collapse and catastrophic outcomes, such as suicide. The authors suggest that during seasons of combat the period between the two peaks may be 60 days, but on the police force it may last as long as 16 years.

Gates, M.A., Holowka, D. W., Vasterling, J. J., Keane, T. M., Marx, B. P., & Rosen, R. C. (2012). Posttraumatic Stress Disorder in Veterans and Military Personnel: Epidemiology, Screening, and Case Recognition. *Psychological Services: 9,* 361-382.

The authors reviewed 177 articles on PTSD in military and veteran populations and concluded that combat-related PTSD prevalence for deployed U.S. military personnel ranges from 14% to 16%. Three categories of risk factors were identified as contributing to PTSD development: pre-trauma factors, trauma characteristics, and post-trauma factors. The following pre-trauma risk

factors were of intermediate strength in terms of their effects on PTSD development: *lower education, lower intelligence, lower military rank, lower socioeconomic status, prior trauma, prior psychiatric history, family psychiatric history,* and *childhood abuse or adversity*. Only the pre-trauma risk factor of *younger age when trauma occurred* was found to be a weak effect. The trauma characteristics factor of *exposure to death,* and *killing or abusive violence* were found to be of intermediate strength. All remaining factors showed strong effects in increasing risk of PTSD. These were trauma characteristics factors of *trauma/combat exposure severity, perceived life threat, combat-related injury*, and *peritraumatic distress or dissociation;* and post-trauma factors of *lack of social support, negative homecoming experiences,* and *exposure to additional life stressors*.

Grieger, T.A., Cozza, S.J., Ursano, R.J., Hoge, C., Martinez, P.E., Engel, C.C., & Wain, H.J. (2006). Posttraumatic Stress Disorder and Depression in Battle-Injured Soldiers. *American Journal of Psychiatry, 163,* 1777–1783.
> The researchers assessed over a 7-month period the rates, predictors, and course of PTSD and depression among seriously injured soldiers during and following hospitalization. Most soldiers who were diagnosed with PTSD or depression at 7 months had not met criteria for either condition at 1 month. Rather, PTSD and depression severity at 7 months was strongly associated with severity of physical problems at 1 month. It appeared that, as the severity of chronic physical impairments became more apparent to the injured soldiers over time, they developed psychiatric symptoms in reaction to their struggles to come to terms with the life-changing consequences of their injuries.

Jakupcak, M., Conybeare, D., Phelps, L., Hunt, S., Holmes, H.A., Felker, B., Klevens, M., & McFall, M.E. (2007). Anger, hostility, and aggression among Iraq and Afghanistan War veterans reporting PTSD and subthreshold PTSD. *Journal of Traumatic Stress, 20*, 945-954.
> Among Iraq and Afghanistan veterans, those with full PTSD and those with partial PTSD did not differ with respect to aggression, and both these groups were significantly more likely to report symptoms of aggression than the non-PTSD group. Anger/hostility ratings were found to occur on a continuum, with the partial PTSD group reporting significantly greater anger and hostility than those in the non-PTSD group, but less than those who tested positive for full PTSD.

Johnson, W.B., Johnson, S. J., Sullivan, G. R., Bongar, B., Miller, L., & Sammons, M. T. (2011). Psychology *in Extremis*: Preventing Problems of Professional Competence in Dangerous Practice Settings. *Professional Psychology: Research and Practice, 42,* 94–104.
> The authors address the impact on the mental health of psychologists who provide services in dangerous work settings, such as in corrections, military, police and disaster response workplaces. Such settings present an enduring threat to psychologists' own personal safety and well-being. As a result, the authors suggest, that psychologists operating in such conditions may end up traumatized, leading to possible empathy failures (that is, lack of caring for their clients/patients). The authors note that such impairments in professional competence must be addressed both for the psychologists' well-being as well as for the welfare of their clients.

Miller, L. (1998). Helping the helpers: Psychotherapeutic strategies with law enforcement and emergency services personnel. In L. Miller, *Shocks to the system: psychotherapy of traumatic disability syndromes*. New York: W.W. Norton & Company.

This chapter addresses the following topics: stress and coping in law enforcement and emergency services—police officers (patrol, homicide investigators and undercover cops), firefighters, body handlers, survivor rescuers and dispatchers and support personnel; intervention services and psychotherapeutic practices—Critical Incident Stress Debriefing, individual psychotherapy, and organizational and departmental responses; significant others: family stresses and family therapy; and police spouse survivors following a line of duty death.

Paton, D., Violanti, J.M., Burke, K., & Gehrke, A. (2009). Traumatic stress in police officers: A career-length assessment from recruitment to retirement. Springfield, Illinois: Charles C Thomas.

This international team of authors addresses the cumulative effects of traumatic stress on police officers throughout the course of their career. The following chapters are included: conceptualization: the police career course and trauma stress; organizational influences on critical incident stress risk; from civilian to recruit: selecting the right stuff; from recruit to officer: transition and socialization; maladaptive coping during the police career; gender differences in policing; the changing nature of exposure during the police career: terrorism and trauma; accommodating terrorism as risk factor: the organizational perspective; the life of established officers; managing critical incident stress risk: integrating person, team, and organizational factors; and disengaging from police service: the impact of a career end.

Perrin, M.A., DiGrande, L., Wheeler, K., Thorpe, L., Farfel, M. & Brackbill, R. (2007). Differences in PTSD prevalence and associated risk factors among World Trade Center disaster rescue and recovery workers. *American Journal of Psychiatry*, *164*, 1385-1394.

The researchers studied PTSD rates across various occupational groups involved with rescue and recovery at the World Trade Center post-9/11. Using the Post-traumatic Checklist, data were analyzed for New York police officers, firefighters, emergency medical disaster personnel, construction, engineering, dust and utilities personnel, sanitation employees, volunteers and other government agencies, for a total of 28,962 workers. Average PTSD rate was 15.4%, with rates being 8.3 % for police officers, 13.9% for sanitation workers, 14.1% for emergency medical personnel, 17.4% for firefighters, 21.1% for construction or engineering workers, and 24.5% for unaffiliated volunteers. The results indicate that workers who were less likely to have had prior disaster training or experience were more seriously affected than professionals trained in disaster management. Two other risk factor for PTSD development were being injured on September 11 and duration of time worked at the site, especially for those who started on September 11.

Van der Ploeg, E., Dorresteijn, S.M., & Kleber, R.J. (2003). Critical Incidents and Chronic Stressors at Work: Their Impact on Forensic Doctors. *Journal of Occupational Health Psychology, 8,* 157–166.

This study explored the impact of critical incidents on forensic medical doctors working in public health facilities in the Netherlands. Almost 15% of the physicians were found to suffer from work-related, clinical-level symptoms of PTSD. The greater the number of traumatic events that the physicians experienced, the more traumatic symptoms they reported, and also the more difficulty they reported in coping with such events. Increased traumatic exposure was also associated with more general physical health symptoms. Physical fatigue and burnout were also found to be directly associated with chronic job stressors unrelated to trauma. Physicians with clinical levels of posttraumatic distress were not necessarily those with burnout or prolonged physical fatigue. The authors conclude that the two processes of traumatization and burnout may co-occur and interact or operate independently as two distinct conditions.

Van der Velden, P.G., Kleber, R.J., Grievink, L., Yzermans, J.C. (2010). Confrontations with Aggression and Mental Health Problems in Police Officers: The Role of Organizational Stressors, Life-Events and Previous Mental Health Problems. *Psychological Trauma: Theory, Research, Practice, and Policy, 2,* 135–144.

> The extent to which the frequency of facing aggression incidents is associated with mental health problems among police officers when organizational stressors, life-events, and previous mental health problems are taken into account is unclear. To elucidate this, data from a longitudinal study of police officers was analyzed (*N* = 473). Mental health problems (MHPs) are here defined as severe anxiety, depression, hostility, burnout symptoms, and/or sleeping problems according the SCL-90–R and MBI. All MHPs were assessed at baseline and 27 months later. Logistic regression showed that serious threat was statistically significant associated with MHPs at follow-up among officers without MHPs at baseline, but not among those with MHPs at baseline. However, stepwise logistic regression showed that serious threat and/or physical aggression were not independently associated with MHPs at follow-up. Organizational stressors, that is, problems with colleagues, were independent predictors in all analyses. Among the total study sample, previous MHPs were the strongest independent predictors. These findings suggest superiors should attend to the mental health, organizational stressors and life-events of their officers regularly and not only following critical incidents at work. [ABSTRACT FROM AUTHORS]

Vinokur, A.D., Pierce, P.F., Lewandowski-Romps, L., Hobfoll, S.E., Galea, S. (2011). Effects of War Exposure on Air Force Personnel's Mental Health, Job Burnout and Other Organizational Related Outcomes. *Journal of Occupational Health Psychology, 16,* 3–17.

> A representative sample of U.S. Air Force personnel *(N=1009)* deployed to the wars in Iraq, Afghanistan, and other locations was assessed twice—before deployment to the theater of war and again, after deployment, 15 months later. Deployment increased risk of exposure to trauma, which in turn, predicted elevated posttraumatic stress symptoms. These symptoms predicted later lowered functioning and physical health, and resource loss. (Resource loss was defined as separation from family and friends, financial losses. and, for members of the Reserve force, separation from their civilian job.) These losses were in turn followed by lower organizational commitment, lower intention to reenlist, lower job satisfaction, and lower job involvement, as well as higher job strain and higher job burnout.

Wagner, D., Heinrichs, M., Elhert, U. (1998). Prevalence of symptoms of Posttraumatic Stress Disorder in German professional firefighters. *American Journal of Psychiatry, 155,* 1727-1732.

> Using the PTSD Symptom Scale and DSM-IV criteria for PTSD (DSM-IV preceded the DSM-5), a sample of German firefighters were found to have a current prevalence rate of 18.2% for PTSD, and 46.2% for partial PTSD. About 27% of the sample were screened as having a psychiatric disorder according to the General Health Questionnaire, with some of the disorders co-occurring with PTSD. The following two risk factors were found to be significant PTSD predictors: years on the job and the number of distressing missions during the last month. The presence of PTSD symptoms was also associated with depressed mood, social dysfunction, bodily complaints, and substance abuse. Note that the authors refer to this study as an investigation of "secondary" traumatic stress disorder. This is despite the fact that the studied firefighters actually were exposed to both direct traumatic events and indirect traumatic details, and the instrument used to assess for the presence of trauma symptoms measured PTSD.

Secondary Traumatic Stress/Compassion Fatigue and Vicarious Trauma

Figley, C. R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized.* Bruner/Mazel: New York.

> Figley (1995) coined the term Compassion Fatigue in order to offer a less stigmatizing, "non-clinical" label for professional helpers experiencing Secondary Traumatic Stress, and these two terms were used interchangeably. Secondary Traumatic Stress/Compassion Fatigue was proposed to mimic the symptoms of PTSD, but to a lesser extent and without meeting the full criteria for the disorder. It was proposed to involve "the natural consequent behaviors and emotions resulting from knowing about a traumatizing event experienced or suffered by a person" (p. 7). As the author also noted, "the process of empathizing with a traumatized person helps us to understand the person's experience of being traumatized, but, in the process, we may be traumatized as well" (p. 15). Exposure to secondary/indirect trauma has been studied primarily in terms of its impact on mental health professionals and social workers, but also on first responders. As stated above, the DSM-5 eliminated the distinction between the potential consequences of primary/direct traumatic exposure and secondary/indirect traumatic exposure, as it clarified that both can lead to PTSD development. The DSM-5 also stated that repeated and/or extreme indirect exposure through electronic media, television, movies, or pictures as part of a person's occupational role could result in PTSD development in high-trauma professions.

Gentry, J.E. (2002). Compassion Fatigue: A Crucible of Transformation. *Journal of Trauma Practice, 1,* 37-61.

> As a result of his work with professional caregivers who reported suffering the effects of compassion fatigue, the author augmented Figley's (1995) definition of compassion fatigue to include pre-existing and/or presently co-existing primary traumatic stress (PTSD), due to prior direct traumatic exposure. Foreshadowing the conclusions of the DSM-5 regarding the similar effects of direct and indirect traumatic exposure, the author argued that it is practically impossible to separate the effects of primary/direct and secondary/indirect traumatic stress on caregivers. Among helping professionals an interactive relationship was proposed to exist among the effects of primary/direct traumatic stress, secondary/indirect traumatic stress (Compassion Fatigue), and burnout. The author stated that, in order to treat secondary traumatic stress and/or burnout among caregivers, primary traumatic stress must be addressed first and treated successfully.

Follette, V.M., Polusny, M.M. and Milbeck, K. (1994). Mental Health and Law Enforcement Professionals: Trauma History, Psychological Symptoms, and Impact of Providing Services to Child Sexual Abuse Survivors. *Professional Psychology: Research and Practice, 25,* 275-282.

> The researchers used a survey to compare work-related post-traumatic symptoms of mental health professionals and law enforcement professionals who provided services to children who had been sexually abused. Post-traumatic symptom assessment was based on diagnostic symptom criteria for PTSD provided in the DSM-III. Law enforcement professionals were found to be significantly more affected than mental health professionals on all measures of psychological symptoms (psychological distress, trauma-specific symptoms, and work-related PTSD symptoms). The authors suggest that this finding may be due to the fact that a large

proportion of mental health professionals (59%) reported participating in personal psychotherapy, whereas only 16% of the law enforcement professionals reported use of personal psychotherapy. The authors addressed the traumatic exposure studied as secondary traumatization, as at the time of this publication PTSD required direct traumatic exposure in order to be diagnosed. However, the authors used PTSD criteria to assess for the presence of trauma symptoms. According to the DSM-5, this publication would now be described as a study of work-related repeated indirect exposure to traumatic stressors, and which could lead to the development of PTSD.

Levin, A.P., & Greisberg, S. Vicarious Trauma in Attorneys. *Pace Law Review, Fall 2003,* Citation 24 Pace L. Rev. 245.

A survey compared the responses of three groups of professionals—mental health providers, social services workers, and attorneys. The attorneys were found to exhibit significantly higher levels of "secondary traumatic stress" and burnout than the other two groups of professionals. The authors attribute this difference to the attorneys' higher caseloads, and lack of processing the effects of trauma through supervision, lack of preparation for the psychological impact of their work, and lack of regular discussion with peers of the negative emotions generated through exposure to clients' traumatic material. Additional aggravating stressors in the case of attorneys were negative experiences with courts and law enforcement personnel, and negative experiences with their own administration and supervisors. In line with other research findings, survey participants in all three groups who had a history of psychiatric treatment had significantly higher rates of secondary trauma and burnout. On the other hand, a preexisting history of trauma (in childhood or adulthood) was not found to be a risk factor for secondary trauma or burnout. For all three groups, "secondary trauma" and burnout ratings increased with client load, again pointing to the possibility of cumulative negative effects of repeated exposure. According to the DSM-5, instead of a study of vicarious trauma in attorneys, this publication would now be described as a study of work-related repeated indirect exposure to traumatic stressors, and which could lead to the development of PTSD.

Pearlman, L. A., & Saakvitne, K.W. (1995). *Trauma and the therapist: Countertransference and vicarious traumatization in psychotherapy with incest survivors.* New York: W.W. Norton.

The term Vicarious Traumatization is defined as "the transformation that occurs in the inner experience of the therapist that comes about as a result of empathic engagement with clients' trauma material" (p. 31). It is a theoretical term based on the Constructivist Self Development Theory, and it focuses less on classic PTSD symptoms and more on changes in the therapist's "self" following cumulative indirect exposure to another person's traumatic material. The areas of the helper's "self" believed to be affected and changed by Vicarious Traumatization are: sense of identity, worldview and spirituality; emotional self-regulation; relationship management; beliefs, assumptions and expectations about the psychological needs for safety, trust, control, esteem, and intimacy; and perception and memory, including imagery. The development of Vicarious Traumatization was proposed to be affected by characteristics of the clinician (e.g., personality, prior trauma, prior mental health history, family mental health history, degree of relevant professional experience), the workplace setting (e.g., type and size of caseload, degree of support offered, adequacy of supervision), and the nature of the material presented by the client (traumatic to the practitioner or not). As stated above, the DSM-5 clarified that both direct and indirect/vicarious traumatic exposure can possibly result in the development of PTSD, which includes negative changes in beliefs.

Tehrani, N. (2011). The incidence of secondary traumatic stress in workers dealing with traumatizing materials, victims and perpetrators. In Tehrani, N. (Ed.), *Managing Trauma in the Workplace* (pp. 100-114). New York, NY: Routledge.

> Using the Impact of Events Scale-Expanded, which assesses for the presence of PTSD, 20% of the men and 28% of the women of a sample of 192 British crime analysts and intelligence officers met PTSD criteria in relation to indirect/"secondary" exposure to traumatic materials as part of their occupational duties. At the time of this publication PTSD required direct traumatic exposure in order to be diagnosed. However, the presence of "secondary trauma" was investigated by using an instrument that assessed for PTSD. It should also be noted that a PTSD diagnosis can now, with the recent publication of the DSM-5, be satisfied by either direct or indirect traumatic exposure. According to the DSM-5, traumatic exposure criteria can be considered met through indirect traumatic exposure, including through electronic media, television, movies, or pictures, if that exposure is extreme and/or repeated for individuals working in high stress occupations.

Yassen, J. (1995). Preventing secondary traumatic stress disorder. In Figley, C.R. (Ed.): Compassion Fatigue: Coping with Secondary Traumatic Stress Disorder in those who Treat the Traumatized. (pp. 178-208). New York: Brunner/Mazel.

> The author stated that secondary traumatic stress affects the following four areas of occupational functioning: (1) job performance, including decreases in quality and quantity of work, decreases in motivation, avoidance of job tasks, increase in errors, obsession about details and perfectionistic standards; (2) staff morale, including dissatisfaction, loss of interest in the job, apathy, negativity, lack of appreciation; (3) staff social interactions, including withdrawal from co-workers, poor communication, poor conflict management and impatience; and (4) staff conduct and behaviors, including absenteeism, tardiness, irritability, irresponsibility, overwork and frequent job changes.

Burnout

Maslach, C., Jackson, S.E. and Leiter, M.P. (1996). *MBI: The Maslach Burnout Inventory: Manual*. Consulting Psychologists Press, Palo Alto, CA.

> The concept of traumatic stress differs from the concept of "burnout." Burnout addresses job demands that are typically unrelated to traumatic exposure, such as working long hours, having little down time, and experiencing continual peer, customer, and supervisor demands. Burnout has been found to involve three dimensions: emotional exhaustion; depersonalization and progressive loss of idealism (viewing and treating others in the workplace impersonally, callously, and as objects); and self-perceptions of diminished effectiveness (reduced sense of personal accomplishment and reduced commitment to one's profession). That is, key characteristic of burnout include a negative shift in the way helping professionals view the people they serve due to a reduced sense of personal accomplishment and due to the depletion of emotional energy experienced as a result of working conditions.

Schaufeli, W.B., Leiter, M.P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International, 14,* 204-220.

> Purpose – The purpose of this paper is to focus on the career of the burnout concept itself, rather than reviewing research findings on burnout. Design/methodology/approach – The paper presents an overview of the concept of burnout. Findings – The roots of the burnout concept seem to be embedded within broad social, economic, and cultural developments that took place in the last quarter of the past century and signify the rapid and profound transformation from an industrial society into a service economy. This social transformation goes along with psychological pressures that may translate into burnout. After the turn of the century, burnout is increasingly considered as an erosion of a positive psychological state. Although burnout seems to be a global phenomenon, the meaning of the concept differs between countries. For instance, in some countries burnout is used as a medical diagnosis, whereas in other countries it is a non-medical, socially accepted label that carries a minimum stigma in terms of a psychiatric diagnosis. Originality/value – The paper documents that the exact meaning of the concept of burnout varies with its context and the intentions of those using the term. [ABSTRACT FROM PUBLISHER]

Resilience

Bonanno, G. A. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist, 59,* 20–28.

> The author defined resilience to loss and trauma as the ability of adults who are exposed to a single isolated and potentially highly disruptive event (e.g., life-threatening situation) to maintain a stable equilibrium psychologically and physically, and healthy levels of functioning. He listed a number of personality factors identified through research to be associated with resilience in the face of loss and traumatic stress. Such factors include hardiness (i.e., being committed to finding meaningful purpose in life, the belief that one can influence one's surroundings and the outcome of events, and the belief that one can learn and grow from both positive and negative life experiences, confidence, ability to pursue active coping and social support), self-enhancement (i.e., positive biases in relation to the self/high self-esteem), repressive coping (i.e., avoidance of unpleasant thoughts, emotions and memories), and positive emotions and laughter. The author suggested differing trajectories over time for resilience as opposed to recovery from loss and trauma. Chronic trauma was conceived as involving severe disruptions in normal functioning that are sustained over time with little improvement. Delayed onset PTSD was proposed to involve mild to moderate disruptions in normal functioning at first, which later become increasingly more severe. Recovery from trauma was proposed to start with moderate disruptions in normal functioning, with these disruptions lessening over time, and eventually reaching mild levels. Resilience was conceived as showing a pattern of only mild disruptions in normal functioning across time, without becoming increasingly more severe at any time in relation to a loss or traumatic exposure. This model was proposed to describe the trajectories of resilience and recovery from trauma following exposure to a single, isolated potentially traumatic event. It does not address the effects on resilience and recovery following multiple traumatic exposures.

Bonanno, G.A., Galea, S., Bucciarelli, A., & Vlahov, D. (2007). What Predicts Psychological Resilience After Disaster? The Role of Demographics, Resources, and Life Stress. *Journal of Consulting and Clinical Psychology, 75,* 671–682.

> The authors studied degree of resilience of residents of New York City and surrounding areas (*N*=2,752) about six months after the September 11 terrorist attacks. Resilience was defined as reporting no PTSD symptoms or only one such symptom, and low levels of depression and substance use. Results of this study showed that the following factors uniquely predicted the presence of resilience: participant gender (men were found to be more resilient than women); age (older than 65 more resilient than 18-24-year olds); race/ethnicity (Asians were found to be more resilient than Whites); education level (college-educated participants were found to be less resilient than those with less than high-school education); less income loss; presence of social support; fewer chronic diseases; less direct impact of September 11; fewer recent life stressors; fewer past prior traumatic events, and absence of experiencing an additional traumatic event since September 11.

Fontana, A., & Rosenheck, R. (1998). Psychological Benefits and Liabilities of Traumatic Exposure in the War Zone. *Journal of Traumatic Stress, 11,* 485-503.

> Data from the National Vietnam Veterans Readjustment Study *(N=1,198)* were used to examine psychological benefits (positive changes in the kind of a person one considers oneself to be) and liabilities (negative changes) due to traumatic exposure at war. Psychological benefits were measured by assessing affirmation of patriotic beliefs (e.g., appreciating the United States or

freedom more), self-improvement (e.g., increased self-confidence, assertiveness or maturity, strengthened religious faith), and solidarity with others (e.g., increased compassion, cooperation with or tolerance of others). Psychological liabilities were measured by assessing disillusionment of patriotic beliefs (e.g., perceived incompetence in the conduct of war), self-impoverishment (e.g., becoming less ambitious, valuing life less, weakened religious faith), and alienation from others (e.g., becoming more prejudiced or cynical about the goodness of mankind, or developing more problems in relating to authority figures). Both psychological benefits and liabilities increased with traumatic exposure, but for psychological benefits there was an inverted U relationship. For example, solidarity was highest at intermediate levels of traumatic exposure. Psychological liabilities were positively associated with the development of PTSD. However, psychological benefits moderated the effects of psychological liabilities. "These results suggest, then, that the sense that one coped successfully with the trauma appears to be the best insulation against developing PTSD from the exposure" (p. 500).

Hobfoll, S.E., Palmieri, P.A., Johnson, R.J., Canetti-Nisim, D., Hall, B.J., & Galea, S. (2009). Trajectories of Resilience, Resistance, and Distress during Ongoing Terrorism: The Case of Jews and Arabs in Israel. *Journal of Consulting and Clinical Psychology, 77,* 138-148.

> This is the 1st longitudinal examination of trajectories of resilience and resistance (rather than ill-being) among a national sample under ongoing threat of mass casualty. The authors interviewed a nationally representative sample of Jews and Arabs in Israel (*N _ * 709) at 2 times during a period of terrorist and rocket attacks (2004 –2005). The resistance trajectory, exhibiting few or no symptoms of traumatic stress and depression at both time points, was substantially less common (22.1%) than has previously been documented in studies following single mass casualty events. The resilience trajectory, exhibiting initial symptoms and becoming relatively nonsymptomatic, was evidenced by 13.5% of interviewees. The chronic distress trajectory was documented among a majority of participants (54.0%), and a small proportion of persons were initially relatively symptom-free but became distressed (termed *delayed distress trajectory;* 10.3%). Less psychosocial resource loss and majority status (Jewish) were the most consistent predictors of resistance and resilience trajectories, followed by greater socioeconomic status, greater support from friends, and less report of posttraumatic growth. [ABSTRACT FROM PUBLISHER]

Meredith, L.S., Sherbourne, C.D., Gaillot, S., Hansell, L., Hans V., Ritschard, H.V., Parker, A.M., & Wren, G. (2011). *Promoting Psychological Resilience in the U.S. Military.* RAND Center for Military Health Policy Research.

> The authors defined psychological resilience as the process of coping with or overcoming exposure to adversity or stress. A review of 270 publications on resilience resulted in the identification of significant resilience contributors in four areas: the individual, family, military unit, and community. *Individual-level Factors* were*:* Altruism, Behavioral Control, Physical Fitness, Positive Affect, Positive Coping, Positive Thinking, and Realism. *Family-level Factors* were*:* Adaptability, Closeness, Communication, Emotional Ties, Nurturing, and Support. *Unit-level Factors* were*:* Cohesion, Positive Command Climate, and Teamwork. *Community-level Factors* were*:* Belongingness, Cohesion, Collective Efficacy, and Connectedness. Of these, the factors with the strongest research evidence were the Individual factors of Behavioral Control, Positive Affect, Positive Coping, Positive Thinking, Realism; the Family factor of Support; the Military Unit factor of Positive Command Climate; and the Community factor of Belongingness. Mental health interventions to increase psychological resilience were proposed to require a

process that involves interactions among an individual, that individual's life experiences, and current life context.
http://www.rand.org/content/dam/rand/pubs/monographs/2011/RAND_MG996.pdf

Paton, D., Violanti, J.M., & Smith, L.M. (Eds.) (2003) *Promoting Capabilities to Manage Posttraumatic Stress: Perspectives on Resilience*. Springfield, Illinois: Charles C Thomas.
> This is a contribution by an international team of experts of empirical findings and theoretical perspectives on the subject of resilience and post-traumatic growth of professionals serving in high-trauma occupations, such as police officers. The following chapters are included: posttraumatic psychological stress: individual, group and organizational perspectives on resilience and growth; routes to posttraumatic growth through cognitive processing; a trait approach to posttrauma vulnerability and growth; hardiness training for resiliency and leadership; hardiness as a resiliency resource under high stress conditions; team resilience; training for resilience; building psychological resilience: learning from the South African Police Service; sense of coherence in managing trauma workers; environmental resilience: psychological empowerment in high-risk professions; the process of trusting: its relevance to vulnerability and resilience in traumatic situations; the family: resilience resource and resilience needs; risk response model; and resilience and growth in high-risk professions: reflections and future directions.

Riolli, L. & Savicki, V. (2010). Coping Effectiveness and Coping Diversity under Traumatic Stress. *International Journal of Stress Management, 17,* 97–113.
> Using the COPE scale, the authors compared the effectiveness of a variety of coping strategies for active-duty US soldiers exposed to traumatic stress conditions. Compared to the norm group, the soldiers exhibited lower levels of engaging in effective/functional coping strategies overall. The following coping strategies were found to be most strongly associated with reduced traumatic stress symptoms: positive reinterpretation, emotional social support, and humor. Higher levels of psychological symptoms were associated with the following coping strategies: emotional venting, denial, mental disengagement, behavioral disengagement, and alcohol and drug use. Thus, avoidance and venting behaviors in the absence of effective problem-solving were ineffective in protecting the soldiers from the impact of traumatic conditions.

Tedeschi, R.G., & Calhoun, L.G. (1996). The Posttraumatic Growth Inventory: Measuring the Positive Legacy of Trauma. *Journal of Traumatic Stress, 9,* 455-471.
> The authors proposed that people exposed to trauma may end up benefitting at least to some degree due to positive changes that they experience as a result of traumatic events in the areas of self-perception, relationships, and philosophy of life. They presented data on a 21-item scale that was found to measure the following five factors: New Possibilities, Relating to Others, Personal Strength, Spiritual Change, and Appreciation of Others. The authors reported gender differences and trauma level differences, with women reporting more benefits than men, and those who experienced severe trauma reporting more benefits than those who did not. It was proposed that posttraumatic growth can exist alongside and independently of PTSD symptoms, so that trauma-exposed individuals may be suffering from adverse reactions while also experiencing an increase in inner strength, a positive future outlook, and enhanced spirituality and engagement with others.