Posttraumatic Stress Disorder Among Law Enforcement Officers: A Review of Risk Factors and Current Trends in Treatment

Anish S. Shah

Corresponding Author: Anish Shah, MD, 480 B Tesconi Circle, Santa Rosa, California 95401
E-mail: ashah@siyanclinical.com

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Abstract

Active duty law enforcement officers are at risk of developing posttraumatic stress disorder (PTSD). Concerns about job status might impede the individual from seeking treatment. Relatively little is known about the emergence and subsequent effects of PTSD among active duty law enforcement officers. It is unclear whether traditional treatment for the disorder is appropriate in this unique population. The current literature on PTSD among law enforcement officers is reviewed using the Ovid Psych Info, Ovid Medline, and NCBI PubMed databases. Data suggest that law enforcement officers exhibiting poorer general adjustment, past history of adversity, personal psychiatric history, familial psychiatric history, and a tendency to engage in cognitive avoidance of distressing thoughts as well as memories about past stressful events are at a greater risk for suffering from PTSD. Further research is suggested to improve the understanding of PTSD and its treatment within law enforcement.

Keywords: Occupational trauma exposure, chronic trauma exposure, posttraumatic stress disorder, law enforcement, treatment.

Introduction

Individuals employed in law enforcement are exposed to a significant degree of job-related stress and traumatic events. Law enforcement officers who experience severe events or who are exposed to a high number of traumatic situations are at greater risk for developing symptoms of traumatic stress, such as chronic sleep loss, intrusion and avoidance symptoms such as flashbacks, and depression (Arble, Lumley, Pole, Blessman, & Arnetz, 2016; Fleischmann, Strode, Broussard, & Compton, 2016; Green, 2001; Holowka & Marx, 2012; Kopel & Friedman, 1999; LeBlanc, Regehr, Jelley, & Barath, 2007; Maia, Marmar, Metzler, Nobrega, Berger, Mendlowicz et al., 2007; Neylan, Brunet, Pole, Best, Metzler, Yehuda et al., 2004; Regehr, Hill, Knott, & Sault, 2003; Rehehr, Johanis, Dimitropoulos, Bartram, & Hope, 2003). Symptoms of traumatic stress can have detrimental effects on the individual’s occupational and/or academic functioning.
(Smith, Schnurr, & Rosenheck, 2005), their interpersonal relationships (Bolton, Hill, O’Ryan, Udwin et al., 2004), their marital relationship (Sayers, Farrow, Ross, & Oslin, 2009), and even their overall family functioning (Cohen, Zerach, & Solomon, 2011; Sayers et al., 2009). Among law enforcement officers untreated PTSD can have cumulative effects on functioning and is a serious public health issue (Ellrich & Baier, 2015; Violanti, 2014).

While both psychological and physiological responses to intensely stressful and traumatic events have long been recognized and studied, PTSD as a distinct diagnostic category did not emerge until the 1980s, when it first appeared in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III; American Psychiatric Association [APA], 1980). PTSD was not extensively studied prior to 1980, and research on various treatment options and their applicability to specific populations remains sparse. There have also been changes to the diagnostic criteria for PTSD in each subsequent manual (APA, 1980; APA, 2013; APA, 2015).

Despite these subtle changes, a diagnosis of PTSD is generally warranted when an individual exhibits excessively recurrent distressing symptoms following an episode of intense stress or trauma and causes the individual some degree of impairment in their ability to function on a day to day basis. Most recently, the DSM-5 has adopted a four-cluster framework for categorizing the individual symptoms of PTSD (APA, 2015). These four symptom clusters recognized by the DSM-5 include: re-experiencing, avoidance, negative cognitive and mood alterations, and hyperarousal (APA, 2015).

PTSD is under-recognized and often left untreated. Undiagnosed and untreated PTSD is of particular concern, given the degree of debilitation associated with the condition. PTSD is among the most severe and impairing of all psychiatric diagnoses (Bobo, Warner, & Warner, 2007). Individuals employed in certain occupations, where they are regularly exposed to stressors and potential trauma, are believed to be at an increased risk for developing symptoms of PTSD (Adjeroh, McCanlies, Andrew, Burchfield, & Violanti, 2014). This is particularly true for active duty law enforcement officers, who have regular involvement with highly stressful and traumatic events throughout their entire careers (Adjeroh et al., 2014; Bernard, Driscoll, Kitt, West, & Tak, 2006). While it is relatively uncommon for law enforcement officers to be called upon to assist with emergency service work, involvement in such work increases an officer’s risk for exposure to potentially stressful and traumatic situations. In general, the day-to-day duties of a law enforcement officer are associated with increased exposure to a wide variety of distressing and emotionally challenging incidents, supporting law enforcement’s reputation as one of the most stressful occupations (Hetherington, 1993; Levy-Gigi, Richter-Levin, & Kéri, 2014).

Relatively little is known about the emergence and subsequent effects of PTSD among active duty law enforcement officers (Arble et al., 2016). Much of the existing data are based upon samples of military veterans (Sayers et al., 2009). Current studies have begun to emerge exploring PTSD within the law enforcement population (Ellrich & Baier, 2015). Findings from this literature might help explain why many law enforcement officers suffer from unmanaged symptoms of PTSD and inform treatment recommendations for this specific population.
METHODS

A literature search was conducted in the databases Ovid PsychInfo, Ovid Medline, and NCBI PubMed. Key search terms included: post-traumatic stress disorder(s); PTSD; law enforcement officer(s); law enforcement; police; police officer(s). The literature search covered the period 1995-2015. Only articles in English were included. Articles on military personnel were excluded. This search yielded 665 articles. A second selection process was conducted, in which studies were included that were considered of the highest scientific quality. These types of studies included: longitudinal studies, systematic reviews, cross-sectional studies, and clinical studies. Case studies and other qualitative studies were excluded. All manuscripts were published in peer-reviewed journals.

RESULTS

Prevalence:

Twelve-month prevalence rates of PTSD across the United States are estimated to be about 3.5% (APA, 2015). Lifetime prevalence of the disorder is 10% for women and 5% for men, ranking it among the top most prevalent anxiety and anxiety-related disorders (Connor & Butterfield, 2003). Projected lifetime prevalence of PTSD using DSM-IV criteria is estimated to be 8.7% at age 75 (APA, 2015). Lower prevalence of the disorder is found in Europe and most Asian, African, and Latin American countries, where estimates are around 0.5% to 1.0% of the population (APA, 2015). Some of the highest prevalence rates of PTSD recorded are from the more developing nations, while the lowest prevalence estimates are seen across countries within Europe (Atwoli, Stein, Koenen, & McLaughlin, 2015; Turnbull, 1998).

Law enforcement officers comprise a population that is regarded at particular risk for developing PTSD, given their regular exposure to highly stressful and traumatic events across the entire course of their career. However, not all individuals who have been exposed to a traumatic event go on to later develop problems with PTSD. Conditional risk of PTSD pertains to the prevalence rate of PTSD only among those individuals who have been exposed to trauma, rather than the broad prevalence rate of PTSD regardless of whether the individuals have a history of exposure to a traumatic event or not (Adjeroh et al., 2014; Resick, Friedman, & Keane, 2007). Rates of PTSD are highest among veterans and individuals who are employed in positions associated with greater exposure to traumatic circumstances, including law enforcement officers, firefighters, and other emergency medical personnel (APA, 2015). Limited data are available on the prevalence of PTSD among law enforcement officers, in particular. Previous studies have reported rates of between 7-19% within this population, though these estimates are somewhat outdated and may be somewhat higher (Carlier, Lamberts, & Gersons, 1997; Darius, Heine, & Böckelmann, 2014; Robinson, Sigman, & Wilson, 1997; West, Bernard, Mueller, Kitt, Driscoll, & Tak, 2008; Yuan, Wang, Inslicht, McCaslin, Metzler, Henn-Haase et al., 2011).

According to surveys conducted by World Mental Health (WMH), relatively low conditional prevalence rates of PTSD were identified across other countries. The conditional prevalence of PTSD in South Africa was 3.5%, which is quite similar to the 3.3% conditional prevalence of PTSD in Spain, and somewhat higher than the rate of 2.5% in Italy (Atwoli et al., 2013; Ellrich & Baier, 2015; Kawakami et al.,...
The type of trauma may also play a role in the development of PTSD symptoms, which is particularly relevant for law enforcement officers. According to WMH surveys, higher conditional prevalence rates of developing PTSD, particularly in response to being exposed to sexual and physical violence, were reported in Spain, Japan, and Northern Ireland (Atwoli et al., 2013; Ellrich & Baier, 2015). In comparison to the general population, law enforcement officers are much more likely to be directly exposed to these types of trauma in the line of duty, placing them at greater risk for developing symptoms of PTSD.

**Risk Factors:**

A few studies exist which have examined the potential risk factors for developing PTSD among law enforcement officers, particularly those who are involved in emergency service work. It seems that officers who exhibit poorer general adjustment, past history of adversity, personal psychiatric history, familial psychiatric history, and a tendency to engage in cognitive avoidance of distressing thoughts and memories about past stressful events are at a much greater risk for suffering from PTSD (Hetherington, 1993). Findings from a study conducted by Weiss and colleagues (1995) suggested that officers in emergency service who tended to dissociate were more at risk for later developing symptoms of PTSD than their peers who did not exhibit this same tendency toward dissociation.

Other factors that place law enforcement officers at increased risk for developing PTSD symptoms following a traumatic event at work include introversion, difficulty expressing feelings, insufficient time off following the trauma exposure, dissatisfaction with job support following trauma exposure, and a low degree of job security (Carlier, Lamberts, & Gersons, 1997). By virtue of their job requirements, the natural progression of the cognitive and emotional processing that must occur following exposure to trauma may be interrupted for law enforcement officers, given that they may have to file multiple reports on details surrounding the event and serve in court sometimes even years following the incident (Ellrich & Baier, 2015). Law enforcement officers must also routinely practice emotional numbing in response to traumatic events in order to more quickly resume action in the line of duty, which can be stressful and also impede post-event emotional processing (Weiss et al., 1995).

Several sociodemographic correlates for the development of PTSD have also been identified and should be considered as significant risk factors compounding the risk for developing PTSD among populations of law enforcement officers. Being female was found to be associated with higher rates of PTSD (in some countries almost double) than that of their male counterparts in all of the countries around the world. Males report being exposed to more general traumatic experiences, while females are more likely to be exposed to sexual trauma (Breslau et al., 2004). It is important to understand why these differences would emerge, as it is likely to have significant impacts on not only treatment-seeking behavior, but also the particular intervention that is employed (van der Meer et al., 2016).

Other identified sociodemographic correlates for developing symptoms of PTSD following exposure to a traumatic event include: low educational attainment, being over 65 years of age, unemployment, and retirement (Breslau et al., 2004; Carlier, Lamberts, & Gersons, 1997; Hetherington, 1993; McFarlane, 1988; Weiss, Marmar, Metzler, & Ronfeldt, 1995). An individual’s personality characteristics, including their
general temperament, likely contribute to developing symptoms of PTSD, as well as their likelihood of getting treatment when symptoms become a problem.

It should be noted that it is reasonable to expect emotional responses to trauma. Almost all individuals will exhibit some degree of symptoms shortly after a traumatic event. These responses, which typically resolve within several days, several weeks, or even a few months, are considered normal and non-pathological (Atwoli et al., 2013; Bisson, Tavakoly, Witteveen, Ajdukovic et al., 2010). It is believed that these symptoms are part of the cognitive and emotional processing of the event that must be completed in order to move toward acceptance, greater resilience, and posttraumatic growth. Continued work in reducing risk factors for law enforcement is crucial, as prevalence rates have been estimated to be as much as 13% for PTSD symptoms among suburban law enforcement officers (Yehuda, McFarlane, & Shalev, 1998). Therefore, a large portion of active duty law enforcement officers face exposure to potentially stressful and traumatizing events on a regular basis. Previous work on PTSD demonstrates that a dose-response relationship exists between exposure to a traumatic event or stressor and the development of negative mental health outcomes (Heavey, Homish, Andrew, McCanlies, Mnatsakanova, Violanti et al., 2015). This means that the more severe the trauma event, the greater likelihood there is for developing symptoms of the disorder (APA, 2015). Fullerton and colleagues (2004) found that first responders to the September 11th attacks exhibited higher rates of acute stress disorder, posttraumatic stress disorder, and depressive disorder, than a comparison group. This is often exacerbated by being assigned to atypical work activities during a disaster, in which they may not have received adequate training for, as well as strenuous work hours, sleep deprivation, separation from family and support, and home destruction (Bernard et al., 2006).

**Comorbid Conditions:**
The rate of comorbidity between PTSD and other psychiatric conditions within the general population is quite high. Lifetime estimates have suggested that between 70 and 80% of individuals suffering from PTSD also have a co-occurring psychiatric condition (Brady, Killeen, Brewerton, & Lucerini, 2000). Some of the most common co-occurring psychiatric conditions include: Generalized Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), Alcohol and Drug abuse, Depression, and even Schizophrenia. The link between PTSD and substance abuse disorders is quite strong. Individuals who are diagnosed with PTSD are 4.5 times more likely to subsequently develop a substance abuse disorder (Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995). There are several possible explanations to account for the high comorbidity between PTSD and substance abuse disorders. Some have postulated that individuals with PTSD use and abuse substances as a way to escape their intense feelings of discomfort associated with difficult memories or flashbacks of the trauma (Araújo et al., 2013). This framework for understanding the comorbidity is known as the self-medicating model. Another model that has been widely accepted in terms of understanding the link between PTSD and substance abuse disorders is the high-risk model. This model suggests that individuals who experience more frequent traumatic situations inherently take more risks and are therefore more likely to abuse substances (Atwoli et al., 2015).

Findings from several studies have suggested that the rates of comorbidity within populations of law...
enforcement officers are similar to the comorbidity rates observed within the general population (Breslau et al., 1998; Kessler et al., 1995). More work is necessary in this area to more carefully estimate the rates of comorbidity among law enforcement officers, given the differential prevalence rates of other conditions within this unique population. Comorbidities that accompany PTSD can lead to many distinct treatment challenges, given the complex intertwining of the mental and physical aspects of each of the conditions. This will be described in more detail below.

Treatment:
As with many other mental health conditions presenting to health care facilities, PTSD is under-recognized and often left untreated. Undiagnosed and untreated PTSD is of particular concern among individuals employed in law enforcement, given the degree of debilitation associated with the condition and the risk for chronic exposure to traumatic events. Some have even suggested that PTSD is among the most severe and impairing of all psychiatric diagnoses (Bobo, Warner, & Warner, 2007). The onset of symptoms for this condition is often delayed weeks, months, or even years following the significant traumatic event, which can lead to longer delays in receiving adequate treatment, while in most instances prevention and early intervention are recommended (APA, 2015).

In guidelines published by the Department of Veterans Affairs/Department of Defense (VA/DoD; 2010), it is recommended that reasonable efforts be made to increase the psychological resilience of workers who are employed in high-risk occupations where the probability of trauma exposure is moderate or high. While very little is known about the possibility of adequately preparing an individual or community for exposure to a traumatic event, several suggestions are identified for pre-trauma preparation that take into account theoretical models of the development of PTSD, existing empirical work on risk factors for developing symptoms of PTSD, and emerging evidence on resiliency factors (Stergiopoulos, Cimo, Cheng, Bonato, & Dewa, 2011; VA/DoD, 2010). These suggestions for preparing individuals in these high-risk professions for potential exposure to trauma include: a) Provide realistic training with vicarious, simulated, or actual exposure to traumatic stimuli likely to be encountered as part of their work; b) Strengthen perceived coping abilities through instruction and practice in the use of a variety of coping skills (e.g., problem-solving strategies, stress inoculation training, assertion, and cognitive restructuring); c) Create supportive interpersonal working environment; d) Develop and ongoing cultivation of adaptive beliefs regarding the work role and potential traumatic events; and e) Develop a workplace-specific comprehensive traumatic stress management program. Despite widespread distribution, explicit implementation of these recommendations is not commonly practiced in most workplaces, with the exception of some military training environments, and there is little evidence on the use of these prevention strategies within law enforcement.

Recommendations have also been made for steps to take following exposure to trauma (Baldwin, Anderson, Nutt, Allgulander, Bandelow, den Boer et al., 2014; CADTH, 2015; VA/DoD, 2010). For known cases of exposure to trauma, it is important to assess the exposure in terms of type, frequency, nature, and severity. Not all individuals who have been exposed to trauma and may be at risk for developing PTSD self-identify as suffering from symptoms of the disorder. Therefore, these guidelines also include provisions for screening individuals for potential symptoms, while also remaining sensitive to concerns regarding social
stigma and adverse occupational effects from results of the screen, both of which are particularly important for individuals employed in law enforcement positions.

For individuals who have been identified as meeting criteria for PTSD, recommendations include both psychotherapy, specifically those that are evidenced-based, and pharmacotherapy as potential first-line treatments (Baldwin et al., 2014; CADTH, 2015; VA/DoD, 2010). In terms of psychotherapy interventions that have received support for the treatment of PTSD symptoms within the general public, these methods include exposure-based therapy, cognitive behavior therapy (CBT), eye movement desensitization and reprocessing (EMDR), relaxation techniques, imagery rehearsal therapy, brief psychodynamic therapy, and hypnotic techniques. In terms of pharmacotherapy, medications receiving the strongest support include selective serotonin reuptake inhibitors (SSRIs; fluoxetine, paroxetine, or sertraline), or serotonin-norepinephrine reuptake inhibitors (SNRIs; venlafaxine). Several other drugs have also been suggested for the treatment of PTSD, including tricyclic antidepressants and monoamine oxidase inhibitors.

While in most instances a combination of psychotherapy and pharmacotherapy is recommended as best practice, monotherapy with either psychotherapy or pharmacotherapy is recommended as a first-line treatment for PTSD (CADTH, 2015). Across all guidelines, no specific provisions were identified for working with individuals employed in law enforcement. Moreover, there are relatively few studies available that examine the effectiveness and applicability of these interventions among populations of law enforcement officers in particular and more work is necessary to address this gap in the literature (Grauwiler, Barocas, & Mills, 2008).

According to practice guidelines established by the International Society for Traumatic Stress Studies, PTSD is associated with significant impairments within the workplace (Kessler et al., 1995). This is of particular concern with regard to law enforcement, given that they face emotionally taxing and traumatic experiences regularly as part of their chosen career. PTSD has been associated with approximately 3.6 lost days of productivity at work every month across the United States (Fox et al., 2012). This lost time emerges primarily in the form of decreased productivity and absenteeism. This highlights the need for appropriate interventions to address the detrimental effects of PTSD within the workplace in order to help the individual effectively return to work (Evans, Pistrang, & Billings, 2013). Of note, the most important factor to consider with regard to treatment for PTSD among law enforcement officers is early intervention during the acute phase immediately following a traumatic or potentially traumatic event (Stergiopoulos et al., 2011; VA/DoD, 2010). This is the period of time when the individual begins to regain their emotional control over the situation, restores interpersonal communications, reconsolidates their identity, regains their sense of empowerment through reengagement in work, and begins to build their sense of hope and anticipation of potential recovery (Crews & Landers, 1987; Heir, Hussain, & Weisath, 2008; Tumbull, 1998; Wessely & Dandeker, 2010; Zohar, Sonnino, Juven-Wetzler, & Cohen, 2009).

The Exposure and Response Prevention (E/RP) component of Cognitive Behavior Therapy (CBT), in particular, was thought to be ideal in treating the impairing symptoms of PTSD. CBT alone is regarded as the ‘gold standard’ for treating many different anxiety disorders and has been shown to be more effective in reducing symptoms of PTSD than

medication (Bisson et al., 2010; Cusack et al., 2015; Roberts, Kitchiner, Kenardy, & Bisson, 2009). This treatment is regarded as well established, following many empirical studies examining its effectiveness. CBT is unique in that the emphasis is placed primarily on the individual’s present situation and is more problem-focused than most other treatments. Individuals who participate in CBT learn skills in identifying distorted patterns of thinking and how to modify their beliefs. With the E/RP component, individuals then begin to practice facing situations that they previously avoided in a structured and graded way. This treatment is based upon the idea that a person’s thoughts and beliefs about a situation have a powerful influence over the manner in which they feel and behave in those types of situations. Individuals gradually learn to face distressing thoughts and memories of the traumatic event, which in turn reduces the associated distress.

Another commonly recommended treatment for managing symptoms of PTSD is Eye Movement Desensitization and Reprocessing (EMDR) therapy. This is an integrative approach which has received some support for its effectiveness in treating symptoms of PTSD. Hypnosis has also been used with some success (Cusack et al., 2015). Medication may also be prescribed for treating symptoms of PTSD. These medications would be used to treat the impairing symptoms of the condition, such as prolonged insomnia and/or intense feelings of anxiety or panic. Though currently available medications are not as effective as participation in a course of CBT, some individuals may prefer this treatment plan as taking medication is more convenient than psychotherapy (Cusack et al., 2015). Given the stigma that still exists in terms of mental health, the law enforcement population, in particular, may prefer medications given their discrete nature, as they do not have to leave work in order to attend regular weekly appointments.

According to clinical trials, selective serotonin reuptake inhibitors (SSRIs) are considered the gold standard for treating symptoms of PTSD (Brady et al., 2000; Cusack et al., 2015; Marshall, Beebe, Oldham, & Zaninelli, 2001). Both sertraline (brand name: Zoloft) and paroxetine (brand name: Paxil) have received approval from the Food and Drug Administration (FDA) as a first-line treatment for PTSD (Brady et al., 2000; Cusack et al., 2015; Friedman, Marmar, Baker, Sikes, & Farfel, 2007; Marshall et al., 2001). SSRIs may not be indicated for managing symptoms of PTSD and alternative medications may be considered for individuals exhibiting symptoms of comorbid conditions such as bipolar disorder, as SSRIs have been shown to induce manic episodes. Other medications can be used off-label for treating PTSD and have received some support from previous trials, though more work is necessary to more fully explore their efficacy in treating symptoms of PTSD. These medications include: venlafaxine (brand name: Effexor), mirtazapine (brand name: Remeron), nefazodone (brand name: Serzone), topiramate (brand name: Topimax), lamotrigine (brand name: Lamictal), carbamazepine (brand name: Tegretol), and divalproex (brand name: Depakote).

Despite the availability of effective treatments, law enforcement officers may be reluctant to seek treatment owing to the stigma of mental health and fear of repercussions at work. More work is necessary in order to identify and reduce any potential barriers to seeking treatment.
PTSD is a complex disorder for which symptoms emerge six months or more following exposure to an intense and emotionally taxing or traumatic situation and law enforcement officers may be at greatest risk for developing difficulties with regard to PTSD, given their regular exposure to traumatic events (Robinson, Sigman, & Wilson, 1997; Zelazny & Simms, 2015). Law enforcement officers suffering from untreated or unmanaged PTSD are at an increased risk for impairments at work, loss of productivity, and even developing other comorbidity psychiatric conditions, such as depression or substance use disorder. It may be difficult for law enforcement officers to consider seeking treatment, owing to limited time-off and stigma surrounding mental health. Therefore, this population brings a collection of unique barriers to receiving the help that they need. The most recommended treatment approach for PTSD among law enforcement officers is CBT, which targets the individual’s experiential avoidance of the traumatic event. Other treatments for PTSD include EMDR and hypnosis, though more work is necessary in order to provide adequate empirical support for these techniques in their effectiveness in treating the symptoms of PTSD.

REFERENCES


9. Atwoli, L., Stein, D. J., Williams, D. R., McLaughlin, K. A., Petukhova, M., Kessler, R.,


prospective analysis. Journal of Nervous and Mental Disorder, 185(8), 498–506.


