Stress and Psychological Effects
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Introduction

A short, historical context for stress responses is in order. The labels we use and the performance expectations we have are shaped by the historical era. For example, today we talk about "post-traumatic stress disorder" (PTSD), while a century and a half ago we spoke of "soldier's heart" in the context of the U.S. Civil War. World War I had its "shell shock," while World War II had its "combat fatigue" (this was the first time psychiatrists were added to U.S. Army division Table of Organization and Equipment). The Korean War had its screening for "section 8's," and Vietnam anti-war protesters brought us PTSD. Cultural change also has its effects. Over time in the U.S., we generally have increased our population's dependence on government rather than on kith and kin. Thus, expectations of individual initiative, hardiness, and independence have faded a bit with the decades.

Since 9/11, and again with Katrina, we have been inundated with the "heroism" of emergency services workers doing their jobs, and with the stress, post-traumatic stress disorder, and general dysfunction of those faced with disasters of various sorts. The authors of this article submit that the commonly held views of heroism and stress response are both inter-related and misplaced.

The United States has an acute shortage of heroes. Few in this country other than the old have combat experience (the Gulf War, Gulf II, and Afghanistan to the contrary notwithstanding). We look for heroes where we can, often labeling as heroes those who are merely doing the jobs for which they were hired (sports figures and emergency

services workers) and as “victims” those who were recipients of no physical harm at all. In essence, we have become accustomed to dramatizing the routine.

In so doing, we have unintentionally created problems. We have defined heroism down, treating the ordinary as if it were exceptional. A consequence of that is that more people perceive what they have done or endured as outside the range of normal human experience, and thus they give themselves permission to demonstrate symptoms of stress. It is crucial to realize that the response of people to stress depends greatly on their expectations. If we expect stability, it becomes a more likely outcome. We are more likely to send a message that we expect stability if we set performance expectations high.

The standard definition of post-traumatic stress disorder includes a broad range of symptoms. The diagnostic criteria offered in the DSM-IV (American Psychiatric Association, 2000, pp. 467-468) include:

Diagnostic criteria for 309.81 Posttraumatic Stress Disorder

A. The person has been exposed to a traumatic event in which both of the following were present:
    1. the person experienced, witnessed, or was confronted with an event or events that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others
    2. the person's response involved intense fear, helplessness, or horror. **Note:** In children, this may be expressed instead by disorganized or agitated behavior
B. The traumatic event is persistently re-experienced in one (or more) of the following ways:
    1. recurrent and intrusive distressing recollections of the event, including images, thoughts, or perceptions. **Note:** In young children, repetitive play may occur in which themes or aspects of the trauma are expressed.
    2. recurrent distressing dreams of the event. **Note:** In children, there may be frightening dreams without recognizable content.
    3. acting or feeling as if the traumatic event were recurring (includes a sense of reliving the experience, illusions, hallucinations, and dissociative flashback episodes, including those that occur on awakening or when intoxicated). **Note:** In young children, trauma-specific reenactment may occur.
    4. intense psychological distress at exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
    5. physiological reactivity on exposure to internal or external cues that symbolize or resemble an aspect of the traumatic event
C. Persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma), as indicated by three (or more) of the following:
    1. efforts to avoid thoughts, feelings, or conversations associated with the trauma
    2. efforts to avoid activities, places, or people that arouse recollections of the trauma

3. inability to recall an important aspect of the trauma
4. markedly diminished interest or participation in significant activities
5. feeling of detachment or estrangement from others
6. restricted range of affect (e.g., unable to have loving feelings)
7. sense of a foreshortened future (e.g., does not expect to have a career, marriage, children, or a normal life span)

D. Persistent symptoms of increased arousal (not present before the trauma), as indicated by two (or more) of the following:
   1. difficulty falling or staying asleep
   2. irritability or outbursts of anger
   3. difficulty concentrating
   4. hypervigilance
   5. exaggerated startle response

E. Duration of the disturbance (symptoms in Criteria B, C, and D) is more than 1 month.

F. The disturbance causes clinically significant distress or impairment in social, occupational, or other important areas of functioning.

The careful reader will recognize that such symptoms are not uncommon, even in people who have neither engaged in war nor been involved in a major natural disaster or a terrorist-related event.

As pointed out by Summerfield (2001), post-traumatic stress disorder "is an entity constructed as much from sociopolitical ideas as from psychiatric ones" and "...the story of post-traumatic stress disorder is a telling example of the role of society and politics in the process of invention rather than discovery" (p. 95). Summerfield is far from alone in his conclusions. The authors suggest that Summerfield's conclusions are correct, but at least six other forces are operative as well.

First, by creating another diagnosis that fits many people, those in the "helping professions" enhance their ability to be compensated for their services. Although some may dismiss this conclusion as cynical, health insurance companies in the U.S. generally do not pay for services unless a diagnosis has been made.

Second, directly applicable to police, we have come to expect that difficult but common circumstances (e.g., serious injuries, horrific accidents, and deaths) will create mental disorder. There is much literature that demonstrates that we will perceive what we

expect, in spite of contrary facts and/or circumstances (see Heuer, 1999; Krauzlis & Adler, 2001; Koyama et al., 2005). The effect of expectation applies also to psychological responses to stressors, e.g., Fields (2000). In general, those who expect more pain, get it. Thus, by emphasizing risk of psychological injury secondary to stressful events, we likely are inviting what we fear.

Third, we engage in rituals, such as critical incident stress debriefings that have a dubious empirical basis and may increase the likelihood that any minor or temporary dysfunctional behaviors will be brought to the forefront. Thus, we ignore the empirical finding summarized by Bonanno (2005, p. 135) that, "Resilience (not recovery) is the most common response to potential trauma." If we were to take Bonanno seriously, we would focus only on high-risk individuals rather than wasting time and money as well as encouraging the law of unintended consequences by broadly requiring or even offering treatment for people exposed to various putatively traumatic situations.

Fourth, by encouraging cynicism and pessimism in many police cultures, we unwittingly enhance the likelihood that dysfunctional behaviors will occur and that they will be detected as PTSD. If we expect dysfunction, we are more likely to perceive it, whether it is present or not.

Fifth, "considerable research attests to the health benefits of expressing negative emotions" (Bonanno, 2005, p. 137). In many police cultures, the "strong, silent" type is rewarded. Thus, we may be rewarding people for behaviors that encourage unhealthiness. That "expressing negative emotions" can have health effects does not, however, imply that every means to do so is either wise or safe. For example, critical incident stress debriefing has been shown to cause more problems than it solves, possibly because of

patient expectancy, self-focused attention to symptoms, motivation to change, and sociocultural role-enactment cues (Bootzin and Bailey, 2005).

Sixth, a diagnosis of PTSD is encouraged by various economic and legal factors, including the possibility of pay for not working (disability payments, sick leave) and a socially acceptable exculpatory explanation for a variety of bad behaviors. None of this implies that PTSD never occurs; rather, it indicates that PTSD can become a conscious or unconscious justification for alcohol abuse, infidelity, abuse of authority, or the need for paid time-off from work.

Evidence on Prevalence and Significance of PTSD

While reading newspaper headlines and listening to television news would lead one to conclude that people are inherently fragile and vulnerable to traumatic events such as 9/11 and Katrina, the available scientific evidence (e.g., Bonanno, 2005; Bonanno et al., 2006) is far more reassuring. How many citizens develop symptoms of PTSD in the first place, and who are they? Recent evidence of the effects of 9/11 on inhabitants of New York City (Bonanno et al., 2006) states, “not many” and “not who you’d suspect.”

Some people might expect that the elderly are vulnerable to psychological damage due to trauma. Wrong. Bonanno and his colleagues (2006) found that those 65 years of age and older were by far the most resilient age group within the population. The most vulnerable age group was those 25-34 years of age. Results of an interesting study of flood victims (Huerta and Horton, 1978) were similar, e.g., “Resilience and fortitude were much more apparent among the elderly than among younger respondents

who expressed more despair"(p. 541). For a summary of other research supporting that conclusion, see http://www.apa.org/psychologists/pdfs/olderadults.pdf.

Most might correctly guess that married people did far better than those not married. Some might correctly guess than males were much less vulnerable than females (or would at least be less likely to admit to such vulnerabilities in a self-report survey). However, few would correctly guess that unmarried couples did far worse than any other group (married, divorced, separated, widowed and never married). In fact, the "unmarried couple" category did worse than any other demographic group within the population. Some other variables operate as most might expect. For example, the rich did much better than the poor, and the educated did much better than the uneducated. Asians did far better than whites, African Americans, Hispanics, and other racial/ethnic groups.

One might assume that soldiers who were seriously injured in battle would consistently meet the criteria for PTSD. That assumption seems reasonable since serious physical injury should be far more stressful than simply being in an area where a bad thing happened (explosion, hurricane, or other possibly traumatic event). One would be wrong. Greiger et al. (2006) show that at the peak time they observed (seven months' post-injury) only 12.2 percent of seriously injured soldiers had PTSD.

There are additional predictors of mental health problems secondary to trauma. For example, Elhai et al. (2006) showed that "recent use of mental health care and intensity of use were related to female gender and greater frequency of trauma" (p. 1505). Dekel et al (2003) showed that performance on the field of battle predicted long-term adjustment. Specifically, they found that even though decorated war heroes had the highest exposure to battlefield stressors, they were the least likely to suffer long-term

psychological consequences of combat. Heinrichs et al. (2005) followed firefighters for two years following basic training. They found "A high level of hostility and a low level of self-efficacy at baseline accounted for 42% of the variance in posttraumatic stress after 2 years" (p. 2276). In other words, those who were hostile and who rated their own capabilities as low were at high risk for PTSD.

Resilience – A Much-Underestimated Capacity

Resilience is typically defined as the capacity to maintain healthy, symptom-free functioning following a potentially traumatic event (Bonanno et al., 2006). These authors also defined resilience as self-reporting either zero or one symptom of PTSD, six months after 9/11. That is a rigorous definition of resilience, since many people who have undergone no traumatic stress at all will demonstrate a symptom or two. Still, based on their definition, more than 70 percent of males and almost 60 percent of females in New York City and nearby were resilient to the effects of 9/11.

McNally et al. (2003) show that strong social networks and high intelligence protect people against PTSD. On the other hand, having demonstrated previous emotional problems places a person at greater risk of PTSD. That said, McNally et al. join a majority of researchers in saying that, "... the vast majority of trauma survivors recover from initial post-trauma reactions without professional help" (2003, 45). Further, they are not persuaded that much of what gets called professional help is really helpful. Some likely cause more problems than they solve. Purveyors of post-trauma services seem sometimes to have forgotten the first dictum of human services: First, do no harm.

Furthermore, even those affected psychologically by trauma need not abandon hope. For example, "4 months after September 11th, the prevalence of PTSD in the population of Manhattan living below 110th Street as measured by two cross-sectional surveys declined to 34.1 percent of the prevalence of PTSD 1 month after the event." (Galea et al., 2004). In other words, two thirds of those showing symptoms of PTSD a month after the event were not showing such symptoms three months later. That people with psychological symptoms and diagnoses often get better on their own (aka "spontaneous remission") is well-established – the literature on such phenomena goes back more than half a century (Eysenck, 1952).

Various mental health services possibly help individuals recover more quickly. Still, however true that may be, no matter what one tries, there is a financial cost and a potential human cost. At present there is little evidence that post-trauma treatments are effective and efficient for emergency responders in general or for others who experience traumatic circumstances, absent a prior showing of psychological damage beyond the first several months post-event. Until and unless the evidence becomes much stronger, the wise manager will look with a cautious eye prior to investing in such activities.

What This Suggests About Our Officers and the Populations We Serve

Reviewing the available literature offers key suggestions for police and civic leaders as we consider how officers and communities will be affected by disasters. First, the most psychologically stable members of the general population are likely to be Asian, married, male, highly educated, and older than their peers. Although we do not know that the same factors are predictors of officer stability, there is at present no reason to believe

otherwise. Police leaders must weigh potential legal challenges against differential assignment – assigning to the most stressful tasks those who have as many of the above characteristics as possible.

Second, to the extent that we value performance under stress, and possibly taking legal challenges into account, we should consider designing our officer selection processes to favor the above characteristics and also screen out those who are hostile and who judge their own capabilities to be lower than average.

Third, we should consider monitoring the performance of officers who appear to lack sufficient social support networks; this will allow us to be in a position to support them as needed. People who have substantial social networks may be more resistant to stress. Further, those officers who perform in an exemplary manner during a stressful event may be the least likely to exhibit symptoms of PTSD. Officers who have solid social networks should not be ignored or denied mental health services, but should also not receive an equal share of limited resources. The criminal justice system often emphasizes focusing our finite resources on those most in need of assistance; the realm of mental health services and police PTSD should be no different.

Fourth, we should explain – repeatedly -- to officers that mass trauma events typically do not traumatize everyone or even most, despite what the news media say. They will do much better if they expect to be resilient. This notion has implications for both formal training and informal communications occurring within agencies.

Fifth, together with other human services agencies, we should plan to provide support and structure for neighborhoods whose inhabitants are poor, non-Asian minority, poorly educated, or young single parents. On the other hand, if resources must be

rationed – and typically they will have to be rationed -- the wealthy and well-educated elderly can largely be left to fend for themselves psychologically.

Sixth, both citizens and officers who are well-prepared, have been trained, and have run through disaster scenarios will be well-suited to weather, both physically and psychologically, whatever disasters occur. Thus, at a minimum emergency training offered by FEMA and Community Emergency Response Team (CERT) training (https://www.citizencorps.gov/cert/) ought to be made generally available and participation by all community members encouraged.

Seventh, in most studies, three-fourths of the populations exposed to trauma prove resilient. That bit of information, although it does not sell airtime or newspaper space, is vital to keep front and center in planning for mass casualty events. The authors do not mean to imply that some officers and civilians will not develop and retain serious psychological damage. Rather, we wish to convey that such folks will be a minority of those populations. In addition, we hope that the above suggestions will help agency leaders use scarce financial and human resources in a manner consistent with the (admittedly imperfect) available evidence.

Concluding Questions and Caveats

It should be noted that the analysis conducted by Bonanno et al. (2006) generally did not account for how multiple demographic and experiential variables might simultaneously influence stress-related outcomes. We await future analyses that will enable us to better examine the interaction of multiple variables. Recovery alone is not, of course, the only treatment outcome that might be of interest. While psychological

recovery is clearly of central importance, we might also wonder about the speed of recovery and possible collateral problems associated with a recovery. The available research does not address whether or not some individuals recovered more quickly and with fewer problems (i.e., periods of substance abuse, marital strife, high blood pressure, etc.) than other individuals. Officers and civilians seeking professional help may (or may not) recover more quickly and with fewer (or more) collateral problems than those recovering by other means. We simply do not know.

Whether the proportion of those suffering PTSD is acceptable or not is something individual organizational leaders need to evaluate. Approximately 1-in-8 (from Grieger, et al, 2006, and taken as a high estimate since it was of seriously wounded combat veterans) is an appreciable amount of a labor force, but we also know that many affected individuals will recover on their own with time (Eysenck, 1952; Galea et al., 2004).

How can police organizations develop resiliency among employees and a healthy internal social environment in order to produce constructive outcomes? Police and other first responders will always be exposed to factors that could generate PTSD; given this reality, how do we integrate healthy coping mechanisms into social environment? What can police leaders and organizations do to create informal environments in which officers can process and express their emotions? Developing an organizational culture that supports common emotional and psychological needs could provide a way to minimize and respond to PTSD and other reactions to traumatic incidents.

Finally, as has often been noted, the most significant stressors for most officers are internal to the department. It is likely the case that we worry unduly about the effects

of stressors external to the organization and not nearly enough about the effect of stressors generated by corrosive organizational cultures.

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