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A NATION CHANGED: A PSYCHOLOGICAL PERSPECTIVE ON 9/11

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Abstract

Drawing on a psychological perspective, this paper discusses the cataclysmic events surrounding the terrorist acts of September 11, 2002, committed on the World Trade Center in New York, the Pentagon in Washington, D.C., Flight 93, which crashed in a field in western Pennsylvania, and the subsequent anthrax scare. Background information on human response to disaster with respect to psychological stages and common reactions is presented, along with relevant selected research from terrorist events of 1995: the sarin gas release in a Tokyo subway and the Oklahoma bombing of the Murrah Building. Attention is focused on public response and the first responder community, including firefighters.

Introduction

Our world has changed.

For the people of the United States of America the world changed drastically since September 11, 2001. An almost naive sense of safety has been replaced with a sense of vulnerability. Some of our valued freedoms have been restricted in the name of security. Homeland Security is a new phrase in our vocabulary and a new government program. New fears have emerged and old fears have resurfaced. We have lost something we still cannot quite define. *On 9/11 our hearts were broken.*

Throughout the United States immediately after 9/11, the phrase "*our hearts are broken, but not our spirit*" appeared on storefronts, poster boards on trees, in windows, on signs in neighborhood yards, and scribbled on school notebooks. The United States flag was displayed everywhere - homes, cars, trucks, private buildings, on lapels and clothing, in the city, the suburbs, the small towns, along country roads all over rural America. *On 9/11 our spirit united and strengthened.*

From a psychological perspective, researchers have studied the human traumatic stress response systematically over the past fifty years. We know that ordinary people reacting to an abnormal circumstance may exhibit specific symptoms. But 9/11 was different, more complicated. We are still framing the questions to define that difference and as yet, after more than six months, have few answers. 9/11 was an unexpected event, but it was different in magnitude and design from previous unexpected disasters. The size was monstrous, inconceivable. It was a violent and deliberate crime on our nation, evoking both extreme anger and deep pride. More than 2,800

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people died as a result of the terrorist acts on 9/11. Unlike with a natural disaster, we still cannot determine the outcomes (see figures 1 & 2).

Figure 1: World Trade Center 9/11

Psychological Phases and Common Reactions after a Disaster

According to the American Red Cross Manual on Disaster Health Services I (1992), victims are likely to experience five psychological phases after a disaster. These phases may also relate to groups, including organizations, communities, and nations.

1. *Initial impact phase.* This phase is characterized by increased anxiety and fears, sometimes shock.

2. Heroic phase. During this phase, the survivors help each other to deal with the catastrophe.

3. Honeymoon phase. The honeymoon phase is characterized by experiences of joy and happiness at having survived and the feeling of being important and special as the receiver of attention and aid from private and government organizations, including the media.

4. *Disillusionment phase.* During this phase, there is increased resentment and frustration at officials and agencies for failing to provide assistance in a more timely fashion.

5. Reconstruction phase. This phase is characterized by thoughts and plans for reconstruction and acceptance of the need to assume responsibility for personal problems. Among other attitudes, setting goals and the recognition that life moves on support the reconstruction phase.

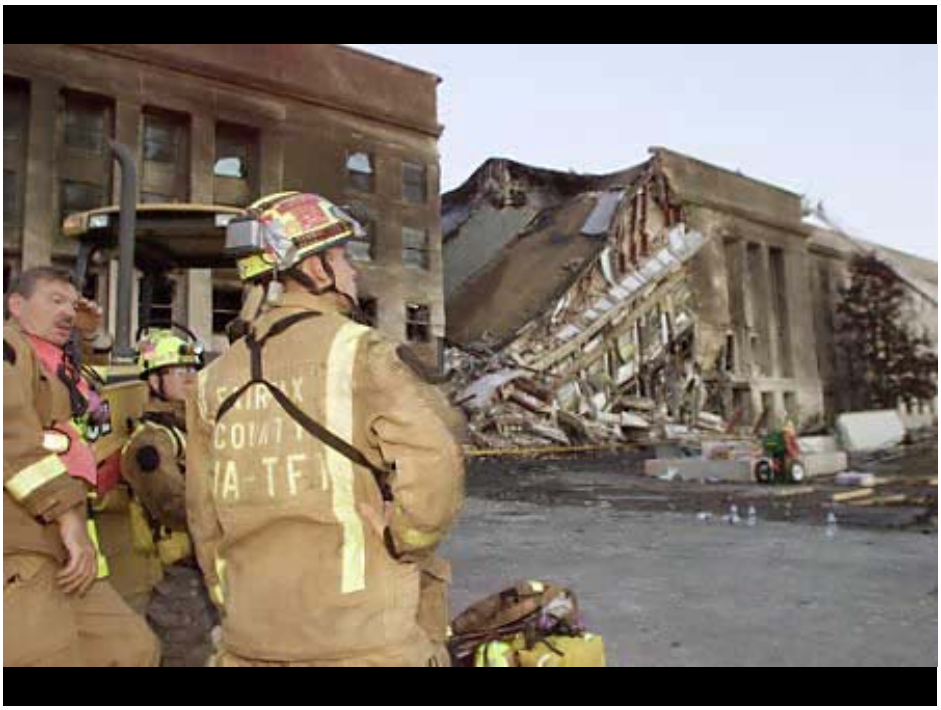
These phases are not linear, and they often overlap. The amount of time spent in each phase varies for each individual or group.

Paralleling these psychological phases, there are known, common reactions to trauma that include the following four responses or stages. First, victims experience **shock and disbelief.** Survivors

are emotionally numb or in denial because the psychic pain is severe - in fact, unbearable. Second, there is a **strong emotional response.** Survivors are cognizant of their situation and feel overwhelmed and unable to cope with it. Their response is emotional and encompasses behaviors ranging from withdrawal to acting out. Third, there is **acceptance.** The survivor begins to accept the magnitude of the situation and makes an effort to deal with it. At this stage, the survivor feels more hopeful and is able to look toward the future and set goals. Survivors are able to take more specific actions to help themselves, their friends, and families. Finally, the survivors feel as if they have returned to their pre-disaster level of functioning. A sense of well-being and adjustment is restored and realistic memories of the experience are developed. This is the fourth and final stage, that of **recovery**. These stages are similar to the well-known stages terminally ill individuals pass through as they approach death, and similar to the stages of grief one undergoes after losing a loved one (James, 1980).

These universal stages are particularly important to understand when working with victims of a disaster. An effective program provides for the expression of emotion and helps guide the survivor to stage three, acceptance, and stage four, recovery (Kalayjian, 1995). Many people have difficulty moving out of stage two and continue exhibiting symptoms, including: withdrawal, sleep disturbances, anger, loss (or gain) in appetite, loss of concentration, increase in alcohol and drug use, and sometimes an increase in domestic violence. A continuation of symptoms beyond one to three months may lead to a diagnosis of Post Traumatic Stress Disorder (PTSD).

Figure 2: The Pentagon 9/11



Post Traumatic Stress Disorder PTSD

PTSD is considered to be the most severe and disabling variation of stress. The general public became aware of PTSD after the Vietnam War, when soldiers were reporting symptoms of a duration and intensity that called for medical intervention. Medically, this disorder was recognized in 1980 by the American Psychiatric Association and described in the Diagnostic and Statistical

Manual for Mental Disorders (1995), the medical diagnostic manual for psychiatric disorders. The diagnosis considers both symptoms and duration. Researchers have identified both immediate and long-range symptomatic reactions to trauma. Initially, symptoms include numbness, denial, avoidance of places or things that remind the individual of the trauma, withdrawal from social interactions, depression, difficulty with concentration, and problems with relationships. Long-range, but more acute symptoms include fearfulness, irritability, sleep disturbance, and flashbacks. In addition, exaggerated startle responses, feelings of guilt, and high levels of anxiety are often noted (Kowalski, 1995). A diagnosis of PTSD is likely if these symptoms are still present three to six months after the traumatic incident (Rundell et al., 1989).

The risk of becoming a victim of PSTD is mostly an outcome of having been exposed to a high-risk, potentially traumatic situation or experience. By definition, a traumatic event is one that is outside the normal range of everyday life events and is perceived by the individual as overwhelming (Doepel, 1991). A traumatic incident may produce an emotional reaction with the potential of inhibiting a worker's ability to function either at the scene or later (Mitchell, 1983), or it may affect the functioning of any individual exposed to the trauma. Clearly, 9/11 qualified as a traumatic incident.

Some psychologists suggest that the greatest emotional vulnerability after a traumatic incident is from the six-month anniversary to the one-year mark after the incident. One New York psychologist is credited with saying that she fears an upsurge in rages, self-destructive behavior, and even suicides. "The despair, the helplessness gets so intense... it bursts out."(Lagnado, 2002, P. B1). An associate professor of clinical psychiatry at Colombia University's medical school says it is classic to see unraveling occur several months after a disaster. After the "honeymoon phase" where everyone pulls together, it all falls apart (Randall in Lagnado, 2002).

An additional component with a terrorist event is that a situation that used to be perceived as benign can now be dangerous. Normal activities, such as sitting at a desk working, walking down a street, attending large public gatherings including sporting events or concerts, or opening daily mail, may become fraught with concern for unknown dangers. Suicide bombers in the Middle East have had a drastic effect on the population there, where the people are fearful of public places, restaurants - any gathering place.

Previous Studies

What do we know about the psychological response to terrorism? What differences exist in the psychological response to a natural disaster in comparison to an act of terrorism? Data in this area are limited. Most of our information is the result of studies of human behavior during and after events such as hurricanes, floods, fires, earthquakes, tornadoes, war, and mass violence. However, we can look to the events in 1995 of the Oklahoma bombing and the Japanese sarin release subway incident for guidance in answering these questions.

Japan Incident

On March 20, 1995, members of the fanatic cult AUM Shinrikyo released sarin, a chemical nerve agent, at five points in the Tokyo subway system. The attack resulted in the death of 12 people and more than 5,000 people sought medical treatment at local hospitals. However, only 500 to 1,000 people actually suffered from exposure to the sarin nerve agent - the majority presenting themselves for treatment were what some experts call "the worried well." Hospitals were overwhelmed (Lord, 2001).

For five years, investigators followed the 582 sarin patients who were given emergency care at St. Luke's International Hospital on the day of the attack, investigating psychological and physiological symptoms. The study demonstrated that victims continue to suffer symptoms five

years after the terrorist attack (Kawana et al, 2001). The most common physical symptoms reported were eye symptoms such as tiredness of eyes, fatigue, muscle stiffness, and headache. Psychological symptoms did not decrease significantly over the five years except for a depressed mood, which significantly improved. In addition, interventions including counseling, medical treatments, and support group activities were associated with fewer symptoms among the victims.

The investigators suggest that the response to traumatic events may differ in different cultures. The example given was that it is not uncommon in Japan to find somatized depression patients who are call "masked depression" patients. Nakano (2001) has suggested the term "masked PTSD" for traumatized patients with unexplained physical symptoms.

Oklahoma Incident

The following quote captures the immediate emotional response of our nation to the 1995 Oklahoma City Bombing: "April 19, 1995, around 9:03 a.m., just after parents dropped their children off at day care at the Murrah Federal Building in downtown Oklahoma City, the unthinkable happened. A massive bomb inside a rental truck exploded, blowing half of the nine-story building into oblivion. A stunned nation watched as the bodies of men, women, and children were pulled from the rubble for nearly two weeks. When smoke cleared and the exhausted rescue workers packed up and left, 168 people were dead in the worst terrorist attack on U.S. soil." http://www.cnn.com/US/OKC/bombing.html

A retired Oklahoma firefighter who led the department's stress-debriefing team notes that six years later, the bombing rescue workers are still haunted by their memories. He noted that alcohol consumption was up and retirements have increased since the incident. This firefighter further said:

> "I'm active in the Retired Firefighters Association of Oklahoma City, and there's some retired firefighters there that stood up and said, 'This is really screwing my head up, and I'm going to go get help.' They're still having problems to this day. Maybe they wake up seeing the bomb scene. Maybe they wake up with the smell. It's just all sorts of things seem to trigger these people off. I've been looking to put together a bunch of fire fighters that were involved in the bombing—like a peer-support group, maybe. But that hasn't happened yet. Fire fighters are real—like I said—the macho-man stuff, and you don't let people see you sweat. So it's just really hard for people that were raised that way." (David Bowman Newsweek Web exclusive http://www.msnbc.com/news/585091.asp#BODY)

The divorce rate in the Oklahoma City Fire Department went up 300% after the Murrah Federal building bombing. Dog handlers at the Oklahoma tragedy reported that the stress of the rescue even affected the search dogs. Again and again these rescue workers and the animals entered the debris-filled bomb crater pit, searching for life and finding only death. (CNN Correspondent Don Knapp)

Public Response to 9/11

In the weeks after 9/11 a news commentator noted, "the tears are never far away." Across the country, there was a tremendous need for people to comfort one another. There was an immediate response across the nation to *do something* - give blood, money, services, prayers. It is normal to experience a feeling of being out of control after exposure to a traumatic incident and the need to normalize, contribute, intervene, to *do something* is a strong motivator. When competent individuals feel helpless, they want to get back in control as soon as possible. Fire departments across the nation collected money in firemen's boots at stop lights; money poured into the Red Cross and relief agencies, medical personnel, mental health professionals, construction workers, and law enforcement personnel from across the country volunteered to go to Washington and New

York. At one point, there were public announcements not to go to the local blood banks as they were overwhelmed with donors. Then, the anthrax scare began when several federal government officials received the powder in their daily mail. Fears escalated.

Figure 3: Split picture: Flag raising WW II and WTC

A note on mass panic behavior

Panic may be defined as nonsocial, blind, irrational behavior (Hodgkinson, 1990). There are two schools of thought on mass panic. One promotes "every man for himself" behaviors, while the other supports attachment or affiliation behavior. Generally, the latter thinking is accepted and supported by studies related to escape from fires - i.e., panic is not automatic in a disaster. This thinking suggests that groups and individuals do adjust to a crisis and only in *extremely threatening* situations may some individuals try to save themselves at the expense of others (NIOSH, 2000).

Data on disasters suggest that 12 - 25% of people remain cool and collected when faced with a disaster, 50 - 75% are stunned, and 10 - 25% evidence disorganized behavior. Overall, on 9/11 the behavior of individuals, victims, responders, and the general public supported the affiliation model. In fact, there were many examples of altruism - the most stunning on Flight 93 where passengers, aware of the terrorist's events in New York and Washington, sacrificed themselves to prevent a possible fourth airplane target.

First Study of 9/11's Psychological Impact

In what is being called the first comprehensive survey of the disaster's psychological impact, a telephone survey of more than 150,000 New Yorkers was conducted between October 16 and November 15, 2001, five to eight weeks after the attack (Galea et al., 2002). This survey offers a glimpse of psychological symptoms in the weeks after 9/11. The research, funded by the National Institute on Drug Abuse and the September 11 Fund and published in the New England Journal of Medicine (March 28, 2002), found that the New Yorkers suffered from the listlessness of

depression or the recurring nightmares and vivid flashbacks associated with PTSD.

For the survey, researchers randomly called approximately 1,000 adults who lived within seven miles of Ground Zero. Half of the subjects were women and nearly three-fourths of the population identified themselves as White. Slightly more than 5% lived within a mile or two of the attack site. Thirty-eight % reported witnessing the attacks, 16% feared they would die, and 11% lost a loved one in the event. Overall, about 1 in 13 reported symptoms consistent with PTSD - nightmares, avoiding thinking about the tragedy, and difficulty falling asleep or concentrating. Nearly 1 in 10 reported suffering symptoms of depression within the past 30 days - change in eating habits, an inability to get out of bed, loss of joy. That is about twice as many as one would expect in the general population.

We can understand these statistics by recognizing that the magnitude and nature of 9/11 changed our responses. We struggle to understand an event of such horrific proportions and devastation. There is anger, and because of the anger, it is more difficult to manage the grief. Nearly 14% of the individuals surveyed reported symptoms of either PTSD or depression. That translates to more than 150,000 New Yorkers living south of 110th Street, according to the researchers. In addition, New Yorkers who had two or more stressful life events in the past year were 5.5 times more likely to develop PTSD than those who had none. Those who had a panic attack during the tragedy were 7.6 times more likely to develop PTSD. Those who lost possessions were 5.6 times more likely to develop PTSD.

As with any disaster, there were a number of factors that appeared to predict whether an individual would develop psychological problems, including proximity to the event, what they saw, whether loved ones were killed or injured, whether they were injured, and whether they suffered the overwhelming feeling they were going to die of a panic attack. The researchers also reported some surprises, such as the finding that Hispanics were two times more likely to suffer PTSD and three times more likely to be depressed than White subjects. This finding is consistent with studies of Vietnam veterans showing higher PTSD rates among Latinos (Galea et al., 2002). This finding needs further study.

Finally, the findings pointed to the need to offer support and help to those living further away from the attack. Robert Butterworth, a Los Angeles psychologist uses the analogy that if you throw a pebble into the water, the closer you are in relation to the bull's eye, the greater the ripple. Similarly, people closest to Ground Zero which can be widened to include the Pentagon, the PA crash site, and the anthrax letter locations are most likely to develop a stress disorder or depression. They are also more likely to be offered help. Generally people are not as sympathetic to people further away from the attack site, in this case, those who lived in uptown Manhattan.

Impact on The First Responder Community

The "line of duty" death toll at the World Trade Center is the largest loss of emergency services personnel in history. An article in The Miami Herald, International Edition, in February 2002 reported that "hundreds of firefighters and emergency medical workers who responded to the WTC attack have reported nightmares, sudden anger, and other psychological symptoms so severe that they were taken off active duty. The 14,000-member NYFD said it has put about 350 people with stress-related problems on light duty or medical leave since September 11. Nearly 2,000 more firefighters, fire officers and workers in the departments Emergency Medical Services unit have seen a counselor since September 11 through the FDNY's (sic) counseling services" (Weissenstein, 2002, P. 7A). This is an unexpectedly large number for an institution that traditionally prefers to handle problems within the close-knit firehouse fraternity.

In December 2001, a conference was held in New York City that brought together individuals with experience in responding to acts of terrorism. The purpose of the conference was to hear and

document the first-hand experiences of emergency responders with their personal protective equipment. In the subsequent report that was issued (Jackson et al, 2002), it was noted that the "intensity of responders' work, the long duration of the response campaigns, the multiplicity of risks, the horrifying outcomes of the attacks, and the lack of knowledge about hazards all contributed to stress." (P.16). At the WTC, many victim bodies recovered were horribly mangled, and in many cases only parts of bodies were recovered.

The report continues to note that stress can also affect responders' judgment about their own health and safety. At the Pentagon, workers wore heavy equipment and it was reported that some workers actually succumbed to seizure-related heat exhaustion due to the excessive heat in the building, their Personal Protective Equipment, and the exertion of carrying the long hoses. Yet, "they were in it until their bottles (air) ran out, and then they'd have this long retreat. In the rescue mode, they would change (air bottles) and go back in. They worked until they dropped." (P.17). The high-stress environment at the World Trade Center, combined with personal and professional bonds, led to greater risk-taking by the first responders during the response and recovery.

There is a bond, a brotherhood amongst responders. Their job is to respond to emergencies, and on 9/11 the police and especially the firefighters were anxious to get to work - they were anxious to get the people out. They, too, experienced feelings of vulnerability. Later, the unknowns related to the anthrax attacks resulted in high levels of uncertainty in response. Information and recommendations kept changing - noted one responder, "how do you protect them (the victims), how do you treat them?" (P.16)

In March of 2002, The Wall Street Journal reported that as the six-month anniversary of 9/11 approached, psychological problems appeared to be mushrooming in the Fire Department (Lagnado, 2002). More than 100 firefighters were out on stress leave in March 2002 as compared to December 2001, and growing numbers are seeking psychological help from the counseling unit. Irritability, lethargy, and an inability to focus are widespread. The article suggested that the firefighters were emerging from the numb phase and suffering terribly, as the funerals were over and there is now time for them to reflect upon the experience.

In conclusion

The psychological response to 9/11 is enfolding. If we correlate with the known psychological stages of trauma as discussed earlier in this paper: 1) shock and disbelief 2) a strong emotional response 3) acceptance and 4) recovery, we may suggest a measure of response. As a nation we have experienced shock, disbelief, and a strong emotional response. The moving tributes to the victims, the renewed patriotism in the country, the heartfelt and varied contributions, and the gratitude expressed to our firefighters and law enforcement personnel attest to this.

We are far from integrating this terror into the fabric of our lives and complete acceptance and recovery are in the distant future. Physical steps have been taken towards recovery with the clean-up of the scarred earth where Flight 93 crashed and removal of the twisted steel and remains of the buildings. New policies and safety procedures are in place, others in the planning stages. Rebuilding at the Pentagon was underway quickly and the restructuring of businesses, jobs and lives has begun. Retribution and justice is sought. Individual daily life moves forth. As time progresses, we continue to find new questions to pose. The situation is dynamic.

We can also evaluate our psychological status according to the five phases of response to a traumatic event presented in this paper: 1) initial impact phase, 2) heroic phase, 3) honeymoon phase, 4) disillusionment phase, and 5) reconstruction phase. We can categorize ourselves as fluctuating between the honeymoon phase and the disillusionment phase. The relief of survival is intermingled with a frustration with the method and timeliness of support for victims both financially and emotionally. There are many indirect victims with the closure of businesses and

lost jobs, especially in the vicinity of the terrorist attack in New York. The effect on the financial community continues to ripple across the country and around the world. The psychological effect on the firefighters and rescue workers is immeasurable. It is suggested that the more debilitating effects of this catastrophe are just beginning for them. This author suggests the importance of developing not only long term psychological support for first responders, but preventative mental health training programs to be incorporated into emergency personnel training curriculums. The mental health effects of 9/11 will last a very long time.

There is pride in the courage of Americans in their response to the trauma of 9/11. This is especially reflected in the stories related to Flight 93, where it appears that the passengers knew about the events in New York and Washington and even in the face of death, they took charge, resulting in the fatal crash and their own deaths in a field in Pennsylvania. Previously, we have been told that in the final stage of the human response to disaster - that of recovery - survivors return to "their pre-disaster level of functioning." However, our response to 9/11 defies this thinking. As with the Civil War, WWI, the attack on Pearl Harbor, WWII, and Oklahoma City, we Americans know we will not return to a pre-disaster functioning (see figures 3 & 4). We may go about our daily business, but life has changed forever.

Our United States Constitution provides for a promise of life, liberty, and the pursuit of happiness. Our precious value of freedom allowed the perpetrators of these terrorist acts access to our country, our education system, our many opportunities for training, our people, and ultimately access to our heart, our very core. How could this have happened? We frame the questions: How could others loathe us so much? How can we protect ourselves? The magnitude of the event forces us to try to find answers to these questions. Emotionally, we are now citizens of the world and can relate to others attacked in their homeland. We became part of the world community in a new way. It happened to us. The terror was within our borders. We experienced what so many other peoples and countries have experienced. Much of the world embraced us and shared our sorrow.

The Chinese have a rich language. There are two symbols for change, and one represents *crisis* and the other *opportunity*. Thus, change is both a crisis and an opportunity. Because of the 9/11 crisis, we in the United States have developed a new sense of community, a deepened respect for firefighters and enforcement personnel, and we have experienced the positive caring and affirmation of others.

Figure 4: Statue of Liberty 9/11volcano

For the future, from a psychological perceptive, *preparation* is the most important activity in which to engage. This is true for the individual, the family, the organization, and the government. The United States is deeply engaged in prevention on a national level. Preparedness is a key component of recovery for survivors as they move on with their lives after a traumatic event. The goal of helping the victim to learn about the enemy/perpetrator/natural disaster and prepare himself or herself, provides a common thread in post-intervention. Information lowers anxiety. There is also a need to move beyond the hate.

Our world has changed. But our world goes on and history supports our survival. Just as an eruption leaves a mountain black and barren. The mountain later comes back to life, different, but alive.

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