9/11: Ten Years After…

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9/11: 'Jumpers' from the World Trade Centre still provoke impassioned debate

Source: http://www.telegraph.co.uk/news/worldnews/september-11-attacks/8737671/911-Jumpers-from-the-World-Trade-Centre-still-provoke-impassioned-debate.html

The images of those who fell from the Twin Towers in New York on September 11, 2001, still shock us today 10 years after the attacks on America.

People look out of the burning north tower of the World Trade Centre Photo: REUTERS

From 110 storeys, a distance of over 1,300ft, it was impossible at first to see what it was that was falling. One witness said it looked like confetti.

Perhaps it was debris: in a desperate attempt to escape as the World Trade Centre towers burned around them, workers were hurling chairs or tables through the windows to reach fresh air before they were rescued. In those early minutes, a rescue operation seemed plausible.

Then two women on the ground, staring up at the gaping hole left in the North Tower by American Airlines Flight 11, clutched at each other and started screaming. It was people that were falling from the towers. Trapped above the point of impact, many witnesses concluded that they were jumping. "The Jumpers", as they became known, were one of the most graphic and controversial elements of 9/11.

Thomas Dallal, a photojournalist at the time, was on the ground near the North Tower. He photographed the two women crying, put a long lens on his camera and turned back to the tower snapping away at the uppermost floors. One of his photographs, to be named "Impending Death", has become an iconic image from that day. It shows around 50 figures leaning out of the broken windows of the North Tower shortly before it collapsed.

News organisations decided not to use footage of the people falling to their deaths. No one wanted to talk about the jumpers. Many still refuse to accept that they jumped, rather that they fell or were forced out by flames and explosions. However, as the years have passed, these images capture what, for many, are acts of heroism. Some fell holding hands. Others appeared to have made makeshift parachutes from clothing knotted together.

Richard Griffiths, the senior editorial director at CNN's headquarters in Atlanta, was in the newsroom that day. "There was a robust discussion, and we did include those images that night in a special report – a four-second shot of someone jumping – but you didn't see them hit the ground," he says. "You got a clear sense of the awfulness of the attack. It's that intimacy of seeing

someone die; it is a very invasive thing to witness a death.

"Usually the experience we have of someone dying is through a parent, or a close relative; you are holding their hand and it is an intensely personal moment. There are thousands of people for whom that person jumping could have been their relative; and they will never know because so many of the bodies were not recovered."

These were some of the most chilling images of the day. "The Falling Man", taken by Richard Drew at the Associated Press, sparked a still-contested investigation into the identity of the man. He was pictured perfectly bisecting the towers, upside down, one knee bent, like an arrow in free-fall in a white jacket and orange T-shirt. The photograph became the subject of a documentary in 2006.

"Nobody is ever really going to know what happened, but I don't think they were jumping," says Dallal. "I think they were falling after being overwhelmed by smoke and heat. I think some were forced out by explosions inside. When you could see what was going on up there, it was calamitous."

Dallal, 47, had been a photojournalist for 14 years covering war zones across the world. "When you cover a conflict as a journalist you go somewhere prepared psychologically. You are well aware that you are taking risks. But this happened in a part of town that was as familiar to me as my own front yard. It felt like I was watching people I ride the subway with every day going through a living hell. Did I understand that I was shooting something incredible? I wasn't even thinking about it. I was on autopilot and I was frightened by what I was seeing."

People jumped or fell from all four sides of both towers. USA Today estimated that around 200 people died in this way. The New York Times ran a more conservative estimate of 50.

It took 10 seconds for each person to fall, it was calculated, as they accelerated at 32ft per second achieving a speed of 150mph. Some who witnessed the jumpers see only desperation. Others see freedom: choosing how to die as a final act of defiance.

Dallal had been working at his home in downtown Manhattan when his then wife called to say a plane had hit the North Tower. She was at a photo-shoot at a loft on Mercer Street which runs due north from the World Trade Centre up through Soho.

"The first plane flew in low and fast over that loft," says Dallal. "It shook the windows and the dogs started barking, then there was a huge explosion. I had heard the explosion where I lived in Chinatown. I knew it wasn't fireworks – if you have ever been around real explosions, like bombs and mortar shells, not only is it loud, it has a 'woomph' to it: you feel it."

With several cameras slung around his neck, he walked the 15 minutes from his apartment to the World Trade Centre. He saw a smouldering piece of metal, part of a plane engine or the landing gear, he thought. There was the sound of breaking glass and debris in the air. "I got spooked and I thought, 'I don't think I should be here,'" he says.

After "Impending Death" ran as a small image in the New York Times at the end of 2001, Dallal received a call from a woman who had lost both her sons in the North Tower. She wanted a copy of the picture enlarged, to see if she could identify her boys. Another woman who had lost her fiancé contacted Dallal with the same request.

"People were looking for closure," he says. "I would have done anything in my power to help anyone who had lost a relative. But I didn't want to compound their anguish. I felt responsible to be very careful with these people; they had already endured more than anyone would want to endure."

Dallal invited the woman who had lost both sons to his house. "After a long conversation I asked her: 'Are you sure want to see the pictures in high resolution?'" She did.

Through Dallal's images and from pictures taken from another angle by a Reuters photographer, the woman thought she was able to make a positive identification of her two sons together at the top of the tower.

"I have got to say that was one of the most moving, difficult experiences as a photo journalist," says Dallal. He has since given up journalism, went to law school and is now an attorney for the UN agency UNRWA, based in Jerusalem. "I am still traumatised," he says. "It's such an unpleasant image I don't like to look at it. It's grisly. It's a bad memory."

In the 2003 Esquire magazine essay about Richard Drew's "The Falling Man", Tom Junod, the award-

winning American journalist, wrote: "Some people who look at the picture see stoicism, willpower, a portrait of resignation; others see something else… There is something almost rebellious in the man's posture, as though once faced with the inevitability of death, he decided to get on with it; as though he were a missile, a spear, bent on attaining his own end."

Richard Drew, 64, who was one of four press reporters present when Robert F Kennedy was assassinated, says he "started to think about The Falling Man like The Unknown Soldier, representing all the people who met the same fate that day."

If Drew hears the sound of a plane over the city it's still "a trigger", he says. "It was like watching a train wreck: people were staring up at the buildings, you turn away and yet you look back."

But it has never been the photographer's job to analyse or romanticise the images taken in war zones, or of catastrophes such as 9/11, says Dallal. "Ten years later, recalling that image and so many scenes that day, I see only innocent victims."

What one man thought initially was debris that looked like confetti became one of the most horrific images of the terrorist attacks. "Perhaps they were jumping," says Dallal. "I don't know, and never will, nor will anyone. There is nothing even remotely romantic about that to my mind."

9/11 and the Successful War

By George Friedman

Source:http://www.stratfor.com/weekly/20110905-911-and-successful-war?utm_source=freelist-f&utm_medium=email&utm_campaign=20110906&utm_term=gweekly&utm_content=readmore&elq=3561819a40da496480d32eedbc770482

It has been 10 years since 9/11, and all of us who write about such things for a living are writing about it. That causes me to be wary. I prefer being the lonely voice, but the fact is that 9/11 was a defining moment in American history. On Sept. 12, 2001, few would have anticipated the course the resulting war would take — but then, few knew what to think. The nation was in shock. In retrospect, many speak with great wisdom about what should have been thought about 9/11 at the time and what should have been done in its aftermath. I am always interested in looking at what people actually said and did at the time.

The country was in shock, and shock was a reasonable response. The country was afraid, and fear was a reasonable response. Ten years later, we are all much wiser and sure that our wisdom was there from the beginning. But the truth is that, in retrospect, we know we would have done things superbly had we the authority. Few of us are being honest with ourselves. We were all shocked and frightened. Our wisdom came much later, when it had little impact. Yes, if we knew then what we know now we would have all bought Google stock. But we didn't know things then that we know now, so it is all rather pointless to lecture those who had decisions to make in the midst of chaos.

Some wars are carefully planned, but even those wars rarely take place as expected. Think of the Germans in World War I, having planned the invasion of France for decades and with meticulous care. Nothing went as planned for either side, and the war did not take a course that was anticipated by anyone. Wars occur at unpredictable times, take unpredictable courses and have unexpected consequences. Who expected the American Civil War to take the course it did? We have been second-guessing Lincoln and Davis, Grant and Lee and all the rest for more than a century.

This particular war — the one that began on 9/11 and swept into Afghanistan, Iraq and other countries — is hard to second-guess because there are those who do not think it is a war. Some people, including President George W. Bush, seem to regard it as a criminal conspiracy. When Bush started talking about bringing al Qaeda to justice, he was talking about bringing them before the bar of justice. Imagine trying to arrest British sailors for burning Washington. War is not about bringing people to justice. It is about destroying their ability

to wage war. The contemporary confusion between warfare and criminality creates profound confusion about the rules under which you operate. There are the rules of war as set forth in the Geneva Conventions, and there are criminal actions. The former are designed to facilitate the defense of national interests and involve killing people because of the uniform they wear. The latter is about punishing people for prior action. I have never sorted through what it was that the Bush administration thought it was doing.

This entire matter is made more complex by the fact that al Qaeda doesn't wear a uniform. Under the Geneva Conventions, there is no protection for those who do not openly carry weapons or wear uniforms or at least armbands. They are regarded as violating the rules of war. If they are not protected by the rules of war then they must fall under criminal law by default. But criminal law is not really focused on preventing acts so much as it is on punishing them. And as satisfying as it is to capture someone who did something, the real point of the U.S. response to 9/11 was to prevent anyone else from doing something — killing and capturing people who have not done anything yet but who might.

Coming to Grips

The problem is that international law has simply failed to address the question of how a nation-state deals with forces that wage war through terrorism but are not part of any nation-state. Neither criminal law nor the laws of war apply. One of the real travesties of 9/11 was the manner in which the international legal community — the United Nations and its legal structures, the professors of international law who discuss such matters and the American legal community — could not come to grips with the tensions underlying the resulting war. There was an unpleasant and fairly smug view that the United States had violated both the rules of war and domestic legal processes, but very little attempt was made to craft a rule of warfare designed to cope with a group like al Qaeda — organized, covert, effective — that attacked a nation-state.

"All the News That's Fit to Print"

The New York Times

Late Edition

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U.S. ATTACKED

HIJACKED JETS DESTROY TWIN TOWERS AND HIT PENTAGON IN DAY OF TERROR

A CREEPING HORROR

Buildings Burn and Fall as Onlookers Search for Elusive Safety

By N. R. KLEINFIELD

President Vows to Exact Punishment for 'Evil'

By SERGE SCHMEMANN

A Somber Bush Says Terrorism Cannot Prevail

By ELISABETH BUMILLER with DAVID E. SANGER

Awaiting the Aftershocks

Washington and Nation Plunge Into Fight With Enemy Hard to Identify and Punish

By R. W. APPLE Jr.

MORE ON THE ATTACKS

As U.S. President Barack Obama has discovered, the failure of the international legal community to rapidly evolve new rules of war placed him at odds with his erstwhile supporters. The ease with which the international legal community found U.S. decision makers' attempts to craft a lawful and effective path "illegal and immoral" (an oft-repeated cliche of critics of post-9/11 policy) created an insoluble dilemma for the United States. The mission of the U.S. government was to prevent further attacks on the homeland. The Geneva Conventions, for the most part, didn't apply. Criminal law is not about prevention. The inability of the law to deal with reality generated an

image of American lawlessness.

Of course, one of the most extraordinary facts of the war that begin on 9/11 was that there have been no more successful major attacks on the United States. Had I been asked on Sept. 11, 2001, about the likelihood of that (in fact, I was asked), my answer would have been that it was part of a series of attacks, and not just the first. This assumption came from a knowledge of al Qaeda's stated strategic intent, the fact that the 9/11 team had operated with highly effective covert techniques based on technical simplicity and organizational effectiveness, and that its command structure seemed to operate with effective command and control. Put simply, the 9/11 team was good and was prepared to go to its certain death to complete the mission. Anyone not frightened by this was out of touch with reality.

Yet there have been no further attacks. This is not, I think, because they did not intend to carry out such attacks. It is because the United States forced the al Qaeda leadership to flee Afghanistan during the early days of the U.S. war, disrupting command and control. It is also because U.S. covert operations on a global scale attacked and disrupted al Qaeda's strength on the ground and penetrated its communications. A significant number of attacks on the United States were planned and prosecuted. They were all disrupted before they could be launched, save for the attempted and failed bombing in Times Square, the famed shoe bomber and, my favorite, the crotch bomber. Al Qaeda has not been capable of mounting effective attacks against the United States (though it has conducted successful attacks in Spain and Britain) because the United States surged its substantial covert capabilities against it.

Obviously, as in all wars, what is now called "collateral damage" occurred (in a more civilized time it would have been called "innocent civilians killed, wounded and detained"). How could it have been otherwise? Just as aircraft dropping bombs don't easily discriminate against targets and artillery sometimes kills innocent people, covert operations can harm the unintended. That is the nature and horror of war. The choice for the United States was to accept the danger of another al Qaeda attack — an event that I am certain was intended and would have happened without a forceful U.S. response — or accept innocent casualties elsewhere. The foundation of a polity is that it protects its own at the cost of others. This doctrine might be troubling, but few of us in World War II felt that protecting Americans by bombing German and Japanese cities was a bad idea. If this troubles us, the history of warfare should trouble us. And if the history of warfare troubles us, we should bear in mind that we are all its heirs and beneficiaries, particularly in the United States.

The first mission of the war that followed 9/11 was to prevent any further attacks. That mission was accomplished. That is a fact often forgotten.

Of course, there are those who believe that 9/11 was a conspiracy carried out by the CIA in order to justify interference in our liberty. But an organization as capable as they believe the CIA is would not need a justification to abridge liberty. That was a lot of work to justify something, and the truly powerful don't need to justify anything. Nor do they need to leave people who are revealing the truth alive. It is striking that the "doubters" believe 9/11 was created in order to crush American freedoms but that the conspirators are so incompetent they cannot shut down those who have discovered the conspiracy and are telling the world about it. Personally, if I were interested in global domination triggered by a covert act like 9/11, I would silence those revealing my secret. But then I'm not that good at it, and the doubters all have reasons why they are blogging the truth and are not dead or languishing in a concentration camp.

I take this detour for four reasons. First, doubters should not be ignored but answered. Second, unless they are answered, they will be able to say the CIA (or whomever they think did it) needed one attack to achieve its goals. Third, the issue the doubters raise is not the structural integrity of a building but the underlying intent of the CIA in carrying out the attack. The why is everything to them, and it is important to point out that it is their explanation of motive that makes no sense. Finally, I am engaging the doubters here because I enjoy receiving an abundance of emails containing fascinating accusations and the occasional threat.

Considering the Failures

But to return to the main theme, it is important here to consider not only the successes but also the failures of the war, and here Iraq comes to mind. There is a case to be made that the Iraq campaign was not irrational, but even more interesting, I think, is the fact that no war is without its disastrous misjudgments, even successful wars. In my mind, the U.S. invasion of the Philippines in 1944 was a major mistake. It did little to contribute to the fall of Japan, cost far more than the 4,000 American lives lost in Iraq, and it could have actually delayed the end of the war. It was opposed by senior commanders and was essentially something Gen. Douglas MacArthur insisted on for political reasons. The Battle of the Somme in World War I cost 600,000 British and French casualties, with 60,000 in one day. Their total gain during the battle was perhaps six miles. And in the American Civil War, the federal drive into Virginia turned into a disaster.

Every successful war is built around a series of defeats and miscalculations. The perfect war is built around deeply flawed and unnecessary campaigns. My own personal selections are not as important as the principle that all successful wars contain massive mistakes. If we simply write off Iraq as one of these, that in itself does not change the fact that the American homeland was not attacked again. Did Iraq contribute to that? This is a question that warrants a long discussion. But conceding that it had no effect simply makes the post-9/11 war normal and, in that normality, tragic.

What has not been normal has been the length of the war. Heavy fighting continues in Afghanistan, Iraq is not quite done and new theaters for covert operations are constantly opening and closing. It is the first U.S. campaign — Afghanistan — that actually poses the most vexing problem, one that is simple to express: When is the war over? That, of course, depends on the goal. What is the United States trying to achieve there?

The initial goal of the invasion was to dislodge al Qaeda, overthrow the government that had supported it and defeat the Taliban. The first two goals were accomplished quickly. The third goal has not been accomplished to this day, nor is it likely that the United States will ever accomplish it. Other powers have tried to subdue Afghanistan, but few have succeeded. The Taliban are optimized for the battlefield they fight on, have superior intelligence and have penetrated and are able to subvert government institutions, including the Afghan military. They have the implicit support of elements in a neighboring major nation — Pakistan — that are well beyond American means to intimidate. The United States has no port from which to supply its forces except the one controlled by Pakistan and only complex and difficult supply routes through other countries.

On the other hand, the Taliban cannot defeat the United States, which can stay in Afghanistan indefinitely. But the major U.S. mission in Afghanistan is concluded. Al Qaeda has not used Afghanistan as a primary base since 2002. Al Qaeda in Pakistan, according to the United States, has been crippled. The Taliban, products of Afghanistan for the most part, have no international ambitions. Al Qaeda has relocated to other countries like Yemen and Somalia.

Given this, continued combat in Afghanistan cannot be linked to al Qaeda. It could be said that the reason to go to war in Afghanistan was to prevent al Qaeda's return. But the fact is that it doesn't need Afghanistan, and if it did return to Afghanistan, it would be no more dangerous to the United States than it currently is with its bases elsewhere.

In wars, and especially in counterinsurgencies, the mission tends to creep upward. In Afghanistan, the goal is now the transformation of Afghan society into one that is democratic, no longer corrupt by American standards and able to defend itself against the Taliban. This goal does not seem attainable given the relative forces and interests in the country.

Therefore, this war will go on until the United States decides to end it or there is a political evolution in Kabul in which the government orders us out. The point is that the goal has become disengaged from the original intent and is unattainable. Unlike other wars, counterinsurgencies rarely end in victory. They usually end when the foreign forces decide to leave.

There is talk of a long war against radical Islam. It had better not be. The Islamic world is more than a billion people and radical Islam is embedded in many places. The idea that the United States has

the power to wage an interminable war in the Islamic world is fantasy. This is not a matter of ideology or willpower or any other measures. It is a matter of available forces, competing international interests and American interests.

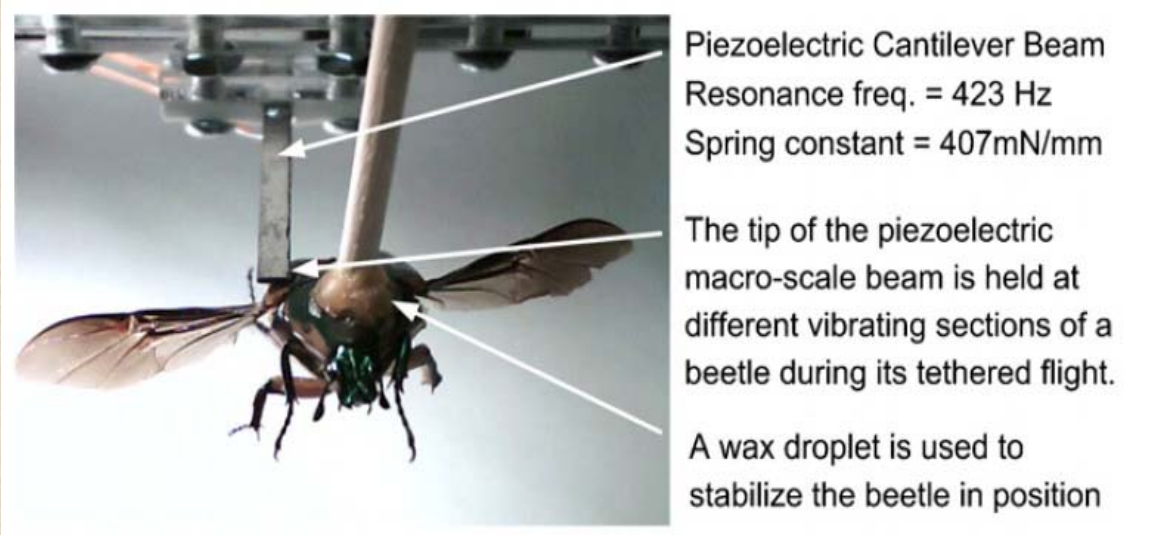
Ultimately, there are three lessons of the last decade that I think are important. The first is the tremendous success the United States has had in achieving its primary goal — blocking attacks on the homeland. The second is that campaigns of dubious worth are inevitable in war, and particularly in one as ambiguous as this war has been. Finally, all wars end, and the idea of an interminable war dominating American foreign policy and pushing all other considerations to the side is not what is going to happen. The United States must have a sense of proportion, of what can be done, what is worth doing and what is too dangerous to do. An unlimited strategic commitment is the definitive opposite of strategy.

The United States has done as well as can be expected. Over the coming years there will be other terrorist attacks. As it wages war in response, the United States will be condemned for violating international laws that are insensate to reality. At this point, for all its mistakes and errors — common to all wars — the United States has achieved its primary mission. There have been no more concerted terrorist attacks against the United States. Now it is time to resume history.

New first response, military tool: surveillance insects

Source: http://www.homelandsecuritynewswire.com/new-first-response-military-tool-surveillance-insects

Micro air vehicles (MAVs) are tiny, insect-size UAVs used for search-and-rescue operations, surveillance, monitoring of hazardous environments, and detection of explosives; University of Michigan researchers had an idea: rather than build insect-size UAVs, why not use the insects themselves to fly these missions?

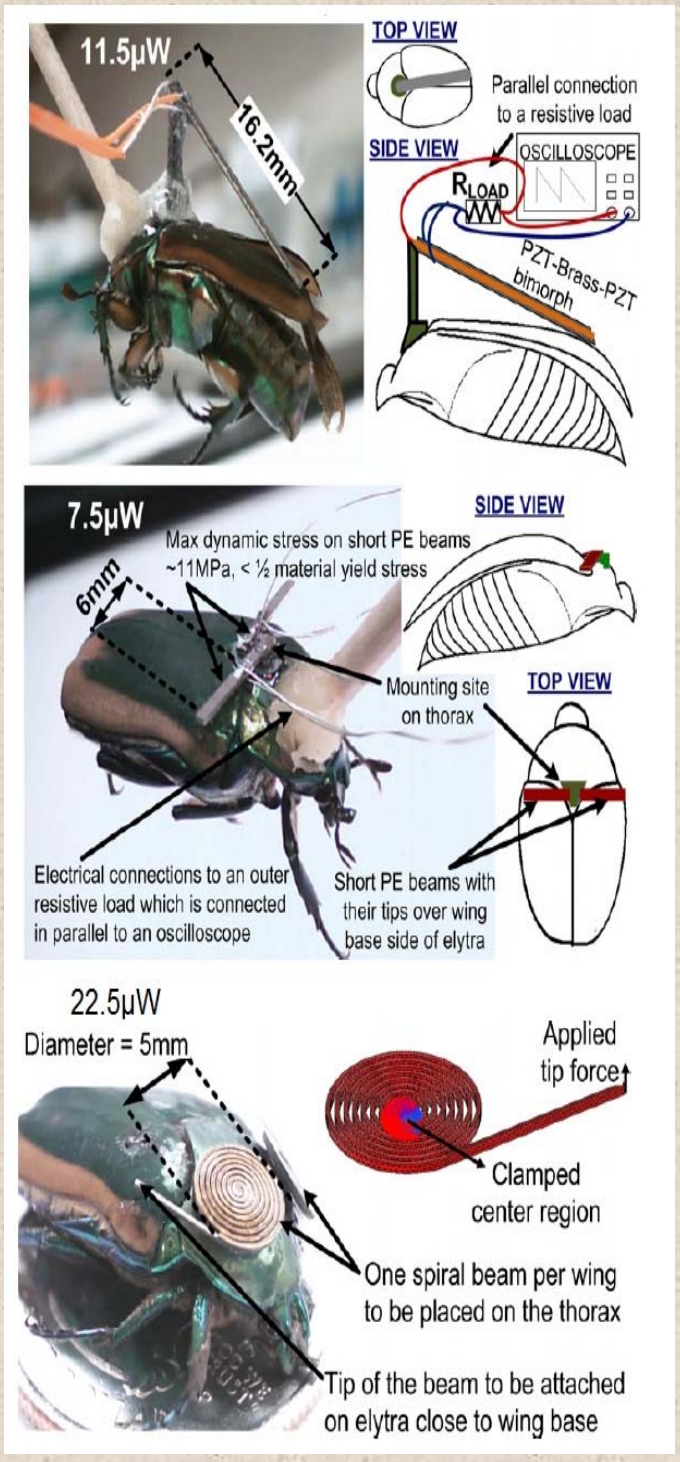


University of Michigan researchers have demonstrated a UAV – or, more precisely, a MAV (micro air vehicle) — that does not need an external power source. The researchers, who reported the results of their research in the *Journal of Micromechanics and Microengineering,* have achieved this featby harvesting the wing energy of an insect.

The Green June beetle, the species used by UM researchers // Source: yourdreambackyard.net

Insects get their energy from the food they eat, and then use that energy fly — and in the process the energy is wasted. The Michigan research team exploited this wasted energy by attaching piezoelectric generators to the wings of the insect.

Physorg reports that the experiment was done on a Green June Beetle and yielded around 45 µW of energy per insect. The beetle had certain implants for controlling its brain and movement. Researchers believe that the energy generated could be increased through a direct connection to the insect's muscles.



The researchers placed the piezoelectric cantilever beams on the wings of the insect. These devices are designed to operate at 85-105 Hz, which is within the flapping frequency range of the Green June Beetle. The energy harvested could be further increased by using tiny solar cells on the top of the wings. This research could enable the extended operation of a MAV or cyborg. This also makes the beetle lighter and makes it capable of carrying tiny devices like camera or tracking electronics.

Physorg quotes the researchers to say that cyborg insects could have the same applications as MAVs, including search-and-rescue operations, surveillance, monitoring of hazardous environments, and detection of explosives.

— Read more in Ethem Erkan Aktakka et al., "Energy scavenging from insect flight," Journal of Micromechanics and Microengineering 21 Number 9 (12 August 2011)

After 9/11, anthrax attacks seemed too natural

By Maggie Fox

Source:http://www.nationaljournal.com/911-anniversary/after-9-11-anthrax-attacks-seemed-too-natural-20110901

Powdered doughnuts. A coffee table. Rolled-up dollar bills. Dead birds. Disposable underpants.
The suspect samples rolled in and public health officials, some working literally in converted closets, worked day and night to test them. The anthrax attacks that followed Sept. 11 tested the limits of the U.S. public health system and changed for a decade the way Americans looked at the mail carrier.

PAUL J. RICHARDS/AFP/Getty Images: U.S. Coast Guard hazardous material workers stand outside the sealed Senate Hart building as contamination tests for anthrax spores were conducted in the Capitol building in 2001.

In the days that followed the Sept. 11 attacks, many bioterrorism experts wondered the same thing - was a biological attack next? For years, these specialists had met, talking about the potential threat of smallpox, nerve gas, plague and Ebola virus. But the No. 1 suspect always was anthrax.
Bioweapons seem like an obvious choice for a terror attack. Powdered anthrax spores released, say, from a small plane could infect hundreds of thousands of people, who wouldn't know until it was almost too late. Anthrax, a type of bacteria found naturally in the soil, is easily treated with antibiotics. But it grows spores that can settle deep in the lungs and by the time they cause symptoms, it is almost always too late to save the victim.

Biological weapons are difficult to trace, and Iraq, Russia, and many other countries were known to have biological weapons programs. The United States had its own program for a while, closed by President Nixon in the late 1960s. The shuttered "anthrax tower" remained standing in 2001 at Fort Detrick, Md., outside Washington.
Powdered anthrax sent through the mail in September and October of 2001 ended up infecting at least 22 Americans and killing five. It was a fitting follow-up to Sept. 11. -- almost too perfect, in fact. As it turned out, the FBI fingered one of the very experts who had been warning of the threat for years. A motive was never discovered, but the suspect, Bruce Ivins, had a history of mental disturbances and ended up

committing suicide in 2008 as federal investigators closed in.

In a review of the response to the attacks released on Thursday by the Trust for America's Health and the Robert Wood Johnson Foundation, public health officials recount some of what they had to deal with in the weeks and months following the attacks.

Lab technicians ran more than a million tests on 125,000 samples. "We realized there was no cavalry coming to sort things out. We would have to manage most of this ourselves," emergency physician Dan Hanfling, special adviser on emergency preparedness and disaster response to the Inova Health System, said in the report.

News organizations and congressional offices were targeted by the anthrax letters. Thousands of Hill workers took antibiotics for weeks on end to prevent infection. Anthrax spores can stay dormant in the lungs for months, and the only way to prevent them from becoming quietly but fatally active is to take drugs continuously. Mail rooms around the country were closed as each letter took on an ominous aspect.

"On October 12, 2001, we received our first anthrax laden letter which was mailed to the office of NBC News here in NYC," Sara Beatrice of the New York City Public Health Laboratory said in the report. "The ensuing investigation and media coverage resulted in our Public Health Laboratory receiving thousands of clinical specimens and environmental samples for testing... coffee tables from a department store, suitcases from the airport, dollar bills that had been rolled up, you name it."

"Here was a typical scenario: A jittery and unnerved town resident would discover 'suspicious' white powder in his community," recalled Howard Koh, now the Health and Human Services assistant secretary for health. "Immediate notification of the local police or fire department would trigger both the closing of the local post office and the sudden arrival of HAZMAT teams, bedecked in imposing space-suit paraphernalia.

"A hastily arranged press conference would feature harried state and local officials trying to explain the unfolding developments to an increasingly anxious public. And when testing in the laboratory subsequently yielded negative results for anthrax, that finding would prompt yet another round of news announcements as well. Multiply this situation by several thousand -- and that was the fall of 2001 in our state, and indeed, around the country."

Anything the least suspicious-looking was sent to hapless state and local public health offices for examination.

"The types of environmental samples received were variable to say the least. From the obvious bulk mail from post offices, suspicious mail from homeowners and powder samples (including powdered doughnuts), to the more obscure airline seat covers, dead birds, body bags, teddy bears, disposable underpants, a Marilyn Monroe effigy and residential mail boxes together with post and concrete anchor.... each presented a new challenge," recounted Phil Lee of the Florida Department of Health.

The attacks did mean that public health labs, badly neglected for decades, got a boost in funding. Congress increased biological warfare-related funding at the National Institute of Allergy and Infectious Diseases by $1.5 billion in 2003. The Project Bioshield Act, which provided $5.6 billion over 10 years to buy new vaccines and drugs, was passed in 2004.

States began stockpiling "biological countermeasures" from latex gloves to face masks. "Cipro" -- short for ciprofloxacin, the most effective antibiotic for treating anthrax -- entered the common vernacular. An embarrassed Centers for Disease Control and Prevention was forced to explain why mostly white congressional staffers got weeks of cipro while mostly black D.C. postal workers whose workplace ended up being contaminated got no such protections. Two D.C. postal workers -- Thomas Morris Jr. and Joseph Curseen -- died.

The FBI estimates it cost $1 billion to clean up the mess. The anthrax spores got into the equipment used to sort and process mail. It took more than two years and cost $130 million to clean up the Brentwood center in Washington where Morris and Curseen worked. The Environmental Protection Agency spent $41.7 million to clean up government buildings in Washington, including Senate office buildings.

NOTE: Download the relevant document from the CBRN-CT Papers section of the Newsletter's website.

Is There a Winner? Ten Years after the Terror Attacks in the United States

By Schweitzer, Yoram

Source: http://www.inss.org.il/publications.php?cat=21&incat=&read=5472

The forthcoming tenth anniversary of the terror attacks in the United States will presumably be a cause for celebration for al-Qaeda and its affiliates in the international jihad movement. We can expect them to mark the date with propaganda and self-adulation in order to express what they see as their great victory over the United States superpower, which they deem an occupying coalition that suppresses and humiliates the Muslim world, of which they are authentic representatives.

In contrast, senior US officials have issued pronouncements and assessments regarding al-Qaeda's imminent demise. This outlook is based on America's success in killing senior al-Qaeda commanders, led by Osama Bin Laden, and on the string of uprisings in the Arab world. In the view of American and other commentators throughout the world, the uprisings are an expression of the failure of Salafist ideology and the appeal of the violence offered by al-Qaeda as a remedy for the troubles of Muslims worldwide. These contrasting claims of victory in the battle over the past decade should be examined carefully, in an attempt to assess where the battle in the coming decade is headed.

Al-Qaeda's claim to victory is predicated on a number of factors. First, the terror attacks that it launched brought about American entanglement in two wars for which the United States has paid, and continues to pay, in blood and treasure: more than 4,000 soldiers killed and some 3,000 victims of the September 2001 attacks; some 30,000 wounded from coalition member states in the wars in Iraq and Afghanistan (beyond the tens of thousands of local people killed in the countries where the fighting is taking place); and the financial cost of military and defense expenditures, which ranges, according to various estimates, from $3-5 trillion. These are massive expenses, particularly without the successful vanquishing of al-Qaeda and its affiliates. Second, al-Qaeda has succeeded in damaging the image of the United States – the only superpower in the post-Cold War era – as invincible, both among friendly states in the West and among many in the Muslim world, who perceive it as an entity hostile to their religion. Third, in spite of the intensive attack by the United States and its allies on al-Qaeda, the organization has succeeded in surviving for over twenty years, including in the decade following the terror attacks on the United States, while maintaining its offensive capabilities, exemplified by attempts at terrorist attacks in various countries around the world, including in the West. Fourth, the organization has succeeded in instilling both awareness of the serious potential threat of terrorism and the sense of insecurity in various countries. It has made life difficult for many civilians, especially in air travel and transportation, because of the need for strict security arrangements in public places.

In contrast, the claim by senior US administration officials that al-Qaeda is on the verge of elimination as an active organization is based on the fact that many of al-Qaeda's senior commanders have been arrested or killed during the past decade and especially in recent years, a result of the campaign of targeted killings around the world and in Pakistan in particular. The policy of targeted killings has proven itself as one of the most effective tools in the war on terror. It is possible that if the United States had undertaken this policy with the same intensity and precision for a number of years immediately after the September 11 attacks and had not diverted resources and the attention of civilian and military leaders to the Iraqi theater, it would have made faster and more

effective progress in the war against al-Qaeda and worldwide jihad.

In addition, the uprisings in the various countries of the Arab world, which were carried out relatively non-violently and negate the path preached by al-Qaeda, caused many people to believe that the Arab spring constituted a death blow to the organization and its ideology. Consequently, the United States and its allies can note with satisfaction that over the last decade, they have prevented al-Qaeda and its affiliates from realizing attempts to carry out strategic terror attacks like those of September 11, and that cooperation between many states – sometimes even hostile states – has been greatly strengthened in preemptive activity against global jihad elements, both in operational intelligence and in extradition, legal proceedings, and prevention.

Thus at the start of the second decade after the 9/11 terror attacks, the two camps continue to confront one other and prepare to continue their battle. The main challenge faced today by Dr. Ayman Zawahiri, Bin Laden's successor, is ensuring the survival and cohesion of the organization and maintaining the preeminence that al-Qaeda has enjoyed among worldwide jihad elements. It is likely that Zawahiri will attempt to achieve this through showcase terror attacks against prominent targets in the West. He will also likely strive to capitalize on the achievements gleaned from the uprisings in the Arab world – which led to the removal of Arab governments hostile to al-Qaeda such as in Egypt and Tunisia, almost certainly to be joined by Libya – in order to establish an infrastructure and recruit new cadres. In its effort to prove that its struggle continues in spite of the demise of its mythological leader, al-Qaeda is expected to rely on its cadre of surviving veteran commanders and a new generation of commanders that has joined its ranks, trained for fighting and terrorist activity during combat alongside the Taliban in Afghanistan and Pakistan. It will also likely be assisted by its affiliates in al-Qaeda in the Hijaz, al-Qaeda in the Maghreb, al-Qaeda in Iraq, and affiliated organizations in Africa and Asia.

In spite of the optimism voiced recently in Washington, the struggle against al-Qaeda and its global jihad affiliates is not over. The sense of relief at the killing of Bin Laden, the man who more than anything symbolized the terrorist threat from al-Qaeda and its affiliates, will likely prove premature. To eliminate the threat from al-Qaeda and its affiliates, the international coalition that has come together to provide a response to worldwide jihad terrorism must continue tirelessly on a systematic campaign to kill those in al-Qaeda's chain of command; neutralize the leadership of its affiliated organizations through targeted killings by the governments in states in which they operate; and thwart and arrest the foreign activists who were trained by them in the states to which they were sent. At the same time, it must improve the effectiveness of its confrontation with the violent message disseminated by the organization and bequeathed to its operatives, affiliates, and sympathizers. It is only an integration of the operational intelligence battle with the ideological battle against global jihad elements that may ultimately lead to the elimination of this infectious problem before another decade elapses.

Taking the terror out of terrorism: mortality data after 9/11

By James M Feeney a, Marc K Wallack b

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Everything changed on Sept 11, 2001 (9/11). A craven attack by terrorists determined to disquiet the American way of life succeeded. In the name of security, the US Government almost immediately levied new restrictions on Americans and new intrusions into daily lives. Soldiers, sailors, airmen, and marines were mobilised in enormous numbers, and citizens were torn from their homes as the war effort wrought bloody revenge. Countries were invaded, regimes were toppled, tyrants and terrorists fled to the mountains, and lives were both taken and given in the names of those who died that September day. Hollywood documented the stories, television glorified heroes and demonised

zealots, and magazines and newspapers retold the stories again and again. Conspiracy theorists whispered of grander plots. Politicians usurped the cause to garner votes, and used the anecdotes of the victims and their families to gain political traction. History was written, rewritten, and rewritten again.

2753 people died in the attacks on the World Trade Center (WTC);[1] uncounted others were never identified. Hospitals in the city scrambled to respond. Patients poured in, many self-triaged. Some of the record keeping in the hospitals was suboptimum, but critical mortality rates were similar to other major events.[2—4] For those who died and their families, it was a terrible price to pay for simply going to work on a sunny Tuesday.

Even before it was fashionable to study terrorists' tactics, we knew something of how they operated. We knew that terrorists often planted more than one device to target first responders and recovery workers. We knew of the purported cyanide device that failed in the Feb 26, 1993, WTC truck bomb.[5, 6] We knew of the tactics used in Beirut and Oklahoma City.[7] The immediate response to disasters is well documented and studied;[2, 3] in the USA, preparation for disaster is now a requirement of the Joint Commission, but what about the aftermath? For this past decade, we have wondered about the exact nature of the exposure at ground zero. What, if anything, was contained in the dust and debris?

The article in *The Lancet* by Hannah Jordan and colleagues[8] is, to our knowledge, the first of its kind. This study investigated death rates of those exposed to the 9/11 attacks in New York, and it is the best way we could ever counter the fear and terror of that day: with data. Terrorists rely on fear and doubt to incite terror; today, however, scientific method triumphs.

Jordan and colleagues studied deaths occurring in 2003—09 among New York City residents who participated in the WTC Health Registry. These participants were identified through linkages to the New York City vital records and the National Death Index. Their findings show that there were 156 deaths in 13 337 rescue and recovery workers, and 634 deaths in 28 593 non-rescue and non-recovery participants. Death rates were similar between these groups when compared with contemporaneous controls. The all-cause standardised mortality ratio for rescue and recovery workers was 0·45 (95% CI 0·38—0·53), whereas for non-rescue and non-recovery participants it was 0·61 (0·56—0·66). Death rates were similar across all levels of WTC-related exposure among rescue and recovery workers, on

the basis of location, timing, and duration of exposure. Increased risk of mortality was, however, identified for those non-rescue and non-recovery workers with high exposure levels (adjusted hazard ratio 1·56, 95% CI 1·15—2·12)—defined as those who reported two or more injuries on 9/11, residents in zip codes in lower Manhattan, including Canal Street and south, who did not evacuate their homes on 9/11, and for school students and school staff of Canal Street who were at school on 9/11. An increased risk of mortality was also identified in non-rescue and non-recovery participants with intermediate exposure (adjusted hazard ratio 1·22, 95% CI 1·01—1·48). Increased heart-disease-related mortality in these participants was also reported, with hazard ratios that suggested a dose-response relation (adjusted hazard ratio 1·21, 95% CI 0·80—1·83, for intermediate WTC-related exposure and 2·06, 1·10—3·86, for high exposure). Although the overall lower than expected death rates seem to be reassuring, they are consistent with the healthy worker and healthy volunteer effects seen early in other cohort studies,[8] and these findings suggest that mortality effects of the disaster are measurable 10 years later in a subset of the exposed population.

Of course, some questions still remain unanswered by this study. Did those non-rescue and non-recovery workers with the highest exposure who stayed near ground zero stay because of pre-existing illness? Were they too sick to leave? Perhaps that single comparison represents a sampling bias. Although the exposure and the death rates are temporally related, are they in fact causally related? These are questions that are simply not answerable by a database study, no matter how large the sample.

Outside of psychiatric research, few data on the long-term sequelae of any terrorist event exist, but researchers caring for the WTC victims and responders are systematically rectifying that lack of reliable information.[9—13] The study by Jordan and colleagues replaces supposition and assertion founded on anecdote with cold, hard, incontrovertible, well presented data. Most of the focus on disaster management is on preparation, critical mortality, and response, and that is why this article is so important. As a society, the more data we have about the events, plans, opportunities, responses, motivations, modus operandi, and especially the aftermath, the more devices we have to take the terror out of terrorism.

We declare that we have no conflicts of interest.

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Short-term and medium-term health effects of 9/11

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Summary

The New York City terrorist attacks on Sept 11, 2001 (9/11), killed nearly 2800 people and thousands more had subsequent health problems. In this Review of health effects in the short and medium terms, strong evidence is provided for associations between experiencing or witnessing events related to 9/11 and post-traumatic stress disorder and respiratory illness, with a correlation between prolonged, intense exposure and increased overall illness and disability. Rescue and recovery workers, especially those who arrived early at the World Trade Center site or worked for longer periods, were more likely to develop respiratory illness than were other exposed groups. Risk factors for post-traumatic stress disorder included proximity to the site on 9/11, living or working in lower Manhattan, rescue or recovery work at the World Trade Center site, event-related loss of spouse, and low social support. Investigators note associations between 9/11 exposures and additional disorders, such as depression and substance use; however, for some health problems association with exposures related to 9/11 is unclear.

Introduction

The Sept 11, 2001 (9/11), terrorist attacks exposed many people to a wide range of horrific events: they saw planes crashing into buildings, people falling from buildings, and the collapse of the World Trade Center (WTC) towers; they were trapped in the dust cloud; and they witnessed injury and death.1 Many lost relatives, friends, and colleagues. Rescue and recovery workers found body remains and personal effects of the deceased. Many people experienced stress, fear, and uncertainty. In the weeks after 9/11, public areas in New York City were covered with pictures of missing people, many of whom had died in the attacks. Furthermore, thousands of people were temporarily or permanently unable to return to their homes, workplaces, or schools.

Additionally, the collapse of the WTC towers exposed many to substances that have been shown to adversely affect health. Routine environmental monitoring equipment in lower Manhattan was damaged and destroyed in the aftermath of the attacks, which made it difficult to quantify exposure to the massive dust cloud generated by the collapsing towers and potentially to toxic substances that permeated the clean-up site, residences, and workplaces in the area. Sampling for asbestos, organochlorine compounds, volatile organic compounds, and polycyclic aromatic hydrocarbons began between Sept 14 and Sept 21, 2001.2—5 The dust and debris contained powdered concrete, gypsum, glass fibres, chrysotile asbestos, polycyclic aromatic hydrocarbons, steel, and several metals such as lead, aluminum, antimony, chromium, molybdenum, and barium.6, 7 The dust was highly alkaline (pH up to 11) and had high concentrations of particulate matter capable of causing respiratory irritation and damage.6 The destroyed buildings also contained electrical cable coated in polyvinyl chloride, some of which was incinerated during and

after the collapse of the towers, which caused the release of dioxins and other chlorinated organic compounds into the atmosphere.6

Studies of the health effects of 9/11 have generally focused on three distinct populations: directly exposed groups (rescue and recovery workers, volunteers, lower Manhattan residents, people who worked in the lower Manhattan area, school staff and students, and passers-by on 9/11; table); those indirectly exposed in New York City (eg, who were not near the WTC site on 9/11 or during the weeks afterwards, and who did not lose a loved one or a job as a result of the attacks); or those indirectly exposed throughout the USA and internationally.

Table - WTC populations being studied with funding from the National Institute for Occupational Safety and Health

	Groups studied	Size (on Dec 31, 2010)*
Fire Department of New York[8–15]	Nearly all firefighters and emergency medical service workers who responded to WTC disaster	15 415 screened so far; 5636 treated in past 12 months
New York and New Jersey WTC Clinical Consortium[17–18]	Law enforcement and other responders, sanitation and construction workers, and volunteers	29 572 screened so far; 8411 treated in past 12 months
WTC Environmental Health Center[25,26]	Lower Manhattan area clean-up workers, office workers, residents, students, school staff, and passers-by	5130 examined so far; 2520 treated in past 12 months
WTC Health Registry[27–34]	Rescue and recovery workers, lower Manhattan residents, area workers, students, and passers-by	71 437 responded to first survey; 68% adults responded to second survey

WTC=World Trade Center. 9/11=Sept 11, 2001.
* Number of people screened and treated are from the National Institute for Occupational Safety and Health.35
† Data from WTC Medical Working Group of New York City.36

WTC populations being studied with funding from the National Institute for Occupational Safety and Health

This Review investigates the health effects of the 9/11 terrorist attacks in the short and medium terms to establish what has been learned, and to identify areas in which further research is needed.

Mental health

More than 150 studies have documented the mental health effects of 9/11. These reports can be divided into two groups: those that documented stress reactions and psychopathology nationwide, and those that focused on psychopathology in the New York City metropolitan area. Most WTC investigators used screening instruments to assess post-traumatic stress disorder (PTSD) such as the PTSD checklist.37 High scores on the checklist are often referred to as probable PTSD because these instruments are not diagnostic for the disorder. Other studies assessed post-traumatic stress symptoms, indicating that respondents endorsed symptoms of stress but did not meet PTSD criteria.

Stress reactions in the USA

Measurements taken 3—5 days after 9/11 suggested that 44% of the adult US population experienced substantial stress.38 Findings from subsequent national studies also showed that individuals across the country experienced fear and insecurity, and had increased rates of post-traumatic stress symptoms 2 months later.39, 40 Research into the potential causes of these symptoms among people with no direct exposure to the 9/11 attacks or to other disasters, could be beneficial in view of the broad reach of mass media compared with direct exposure after a disaster.41 Risk factors associated with post-traumatic stress symptoms up to 4 years after 9/11 included pre-event psychopathology,42 female sex,40, 43 recent immigration to the USA,43 and increased hours of viewing event-related media coverage.40, 43 Overall, individuals who lived outside the New York City metropolitan area were significantly less likely to have probable PTSD than were those inside the area 2 months after 9/11 (4% *vs* 11%, p=0·007).40 A 2004—05 survey44 of nearly 35 000 US adults showed that those who had indirect experience of 9/11—eg, witnessed the attack on television—had the lowest risk of PTSD (1%) of 32 traumatic events listed.

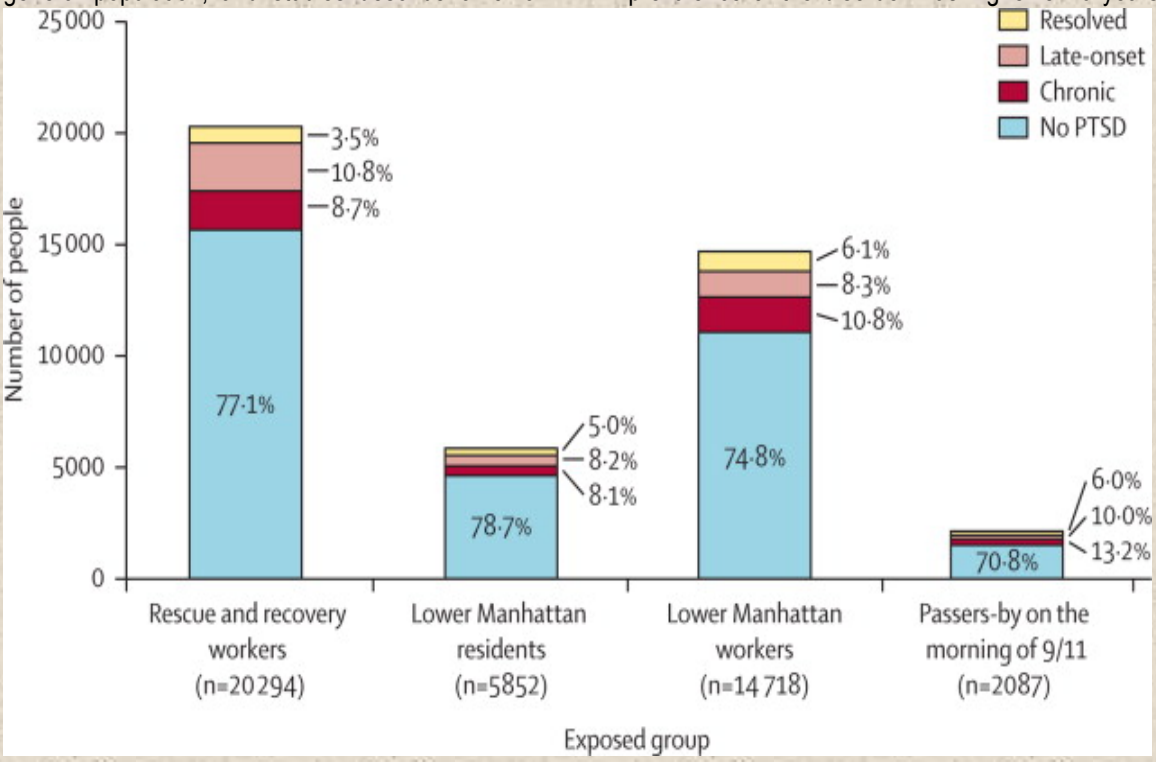
PTSD and depression in New York City

Studies done in the New York City metropolitan area focused on psychopathology, particularly PTSD and depression. Several studies based on a series of cross-sectional surveys45, 46 and subsequent longitudinal work47 led by New York

Academy of Medicine researchers showed that 1—2 months after 9/11, the prevalence of PTSD in 988 residents of Manhattan south of 110th Street was 7·5%, and that for depression was 9·7%. Peri-event panic attacks, loss of possessions, and job loss were risk factors for the development of PTSD, and low social support was a risk factor for depression.45 Prevalence of both PTSD and depression had decreased by 6 months after the terrorist attacks.46

Other investigations have focused on rescue and recovery workers, lower Manhattan residents, students, workers, and passers-by on the day of the attack. The prevalence of PTSD and depression documented was, as expected, higher in all these directly exposed groups than in the general population, and studies describe chronic and delayed-onset PTSD.8, 27 Investigators who used data from the WTC Health Registry48 showed that the prevalence of PTSD 2—3 years after 9/11 was 12·4% in rescue and recovery workers and volunteers, with a range from 6·2% for police to 21·2% for unaffiliated volunteers.28 In other studies, PTSD after 9/11 in firefighters and other rescue and recovery workers has also been associated with functional impairment and disability.8, 16 Comorbidity is common: in recovery workers with probable PTSD, 12·7% also met criteria for panic disorder or depression.16 An earlier start date, longer duration of time worked at the WTC site, and performance of tasks not part of a person's occupation were significant risk factors for probable PTSD.28 Of 3271 workers who evacuated the WTC towers, 15% had probable PTSD 2—3 years after 9/11. An increased risk of the disorder was associated with presence on a higher floor in the WTC towers, late evacuation, exposure to the dust cloud, witnessing horrors, injury, and employment by a firm that sustained fatalities.29

In people enrolled in the WTC Health Registry who did not report a PTSD diagnosis before 9/11, the prevalence of the disorder was higher 5—6 years after the attacks (19%) than after 2—3 years (14%).27 Late-onset PTSD (a report of symptoms consistent with PTSD in the 2006—07 survey, but not in the 2003—04 survey) had developed in 10%.27 The prevalence of chronic PTSD (ie, a positive screen at both timepoints) was highest in rescue and recovery workers, whereas people who worked in lower Manhattan were most likely to have PTSD that had resolved by the time of the



second survey (figure 1). Event-related loss of spouse or job, and low social support were factors associated with probable PTSD at the time of the second survey.27 Researchers have reported an association between trauma before or after the 9/11 attacks and more severe and persistent PTSD after 9/11 in lower Manhattan residents and workers at the WTC site.17, 27, 49

Data are from Brackbill and colleagues.27 Analysis is restricted to individuals enrolled in the World Trade Center Health Registry who did not have a diagnosis of PTSD before 9/11. PTSD=post-traumatic stress disorder. No PTSD=negative screen for PTSD symptoms at both the baseline (2003–04) and follow-up (2006–07) surveys. Chronic=positive screen for probable PTSD (as assessed by a PTSD checklist score ≥44) at both timepoints. Late-onset=positive screen at follow-up survey only. Resolved=positive screen at baseline survey only. 9/11= Sept 11, 2001.

Course of PTSD symptoms in exposed groups

Data are from Brackbill and colleagues.27 Analysis is restricted to individuals enrolled in the World Trade Center Health Registry who did not have a diagnosis of PTSD before 9/11. PTSD=post-traumatic stress disorder. No PTSD=negative screen for PTSD symptoms at both the baseline (2003—04) and follow-up (2006—07) surveys. Chronic=positive screen for probable PTSD (as assessed by a PTSD checklist score ≥44) at both timepoints. Late-onset=positive screen at follow-up survey only. Resolved=positive screen at baseline survey only. 9/11= Sept 11, 2001.

These WTC studies described have some limitations. First, differences in the measurement of symptoms and in recruitment methods might have affected prevalence estimates and restrict comparisons. Two-thirds of the WTC Health Registry participants heard about the Registry through the media and advertising and self-enrolled, and a third were identified and recruited through lists of people thought to be present in the area.30 Registry prevalences of mental health conditions might therefore be overestimates, driven by self-selection and inclusion into the study by individuals who are more sick or more likely to report symptoms. Medical monitoring programmes could be subject to similar self-selection. Second, most studies used screening measures that are proxies for diagnosed disease and have imperfect sensitivity and specificity.50 Third, most of the included investigations have limited information about pre-event psychopathology, so whether PTSD or depression documented after the attacks was new, or a reactivation of previous illness, is unclear. A large proportion of documented mental health problems after mass traumatic events is known to occur in people who already had the disorders.51

Substance use

A small amount of work into substance use shows an increased use of alcohol,16,52—55 tobacco, and marijuana in New York City after 9/11.52 High-level or direct exposure to the attacks has been shown to be an associated factor for increased alcohol use in both adults and adolescents, but rates of smoking rose independently of exposure level.53, 54 In adults, PTSD was associated with increased cigarette smoking after 9/11, and depression with increases in both smoking and alcohol use.55 Similarly, rescue and recovery workers with comorbid probable PTSD, depression, and panic disorder were more likely to report higher alcohol use and emotional disability than were others.16 Substance use in adolescents was linked to knowing someone who died in the attacks and self-report of a parent with decreased functioning.56

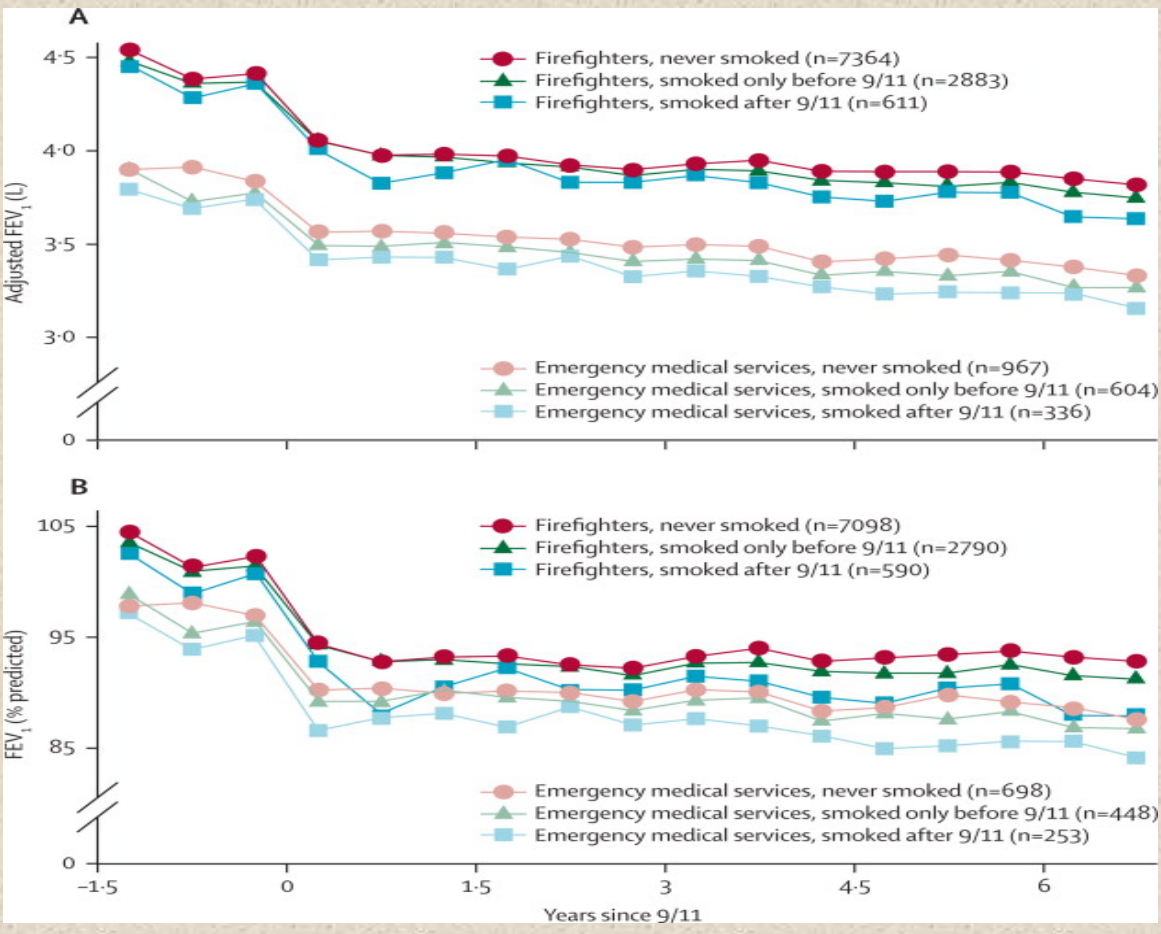
Suicide

Although some studies have shown no significant change in the risk of suicide at the population level in the month after 9/11 compared with previous years,57, 58 others note a significant decrease in suicide both in the New York City area59 and internationally.60 Greater communal support and unity in the aftermath of the 9/11 attacks might have decreased the risk of suicide.59, 60

Mental health of children in New York City

The mental health effects of 9/11 have not been as well studied in children as in adults. In a sample of 8236 New York City students aged 9—21 years taken 6 months after 9/11, 29% of children had at least one of six anxiety or depressive disorders assessed.61 The most prevalent were probable

agoraphobia (15%), separation anxiety (12%), and PTSD (11%).61 Higher rates were associated with greater exposure (a composite variable including proximity to the attack, injury, dust cloud exposure, and death or injury of family member), female sex, a younger age (9—10 years), and a history of previous trauma.61 The severity of children's reactions has been positively correlated with parental distress (parental post-traumatic stress and crying in front of the child) and with the number of graphic images seen on television.62 In New York City, children who had probable peri-event panic attacks were more likely to have probable PTSD 6—9 months later than were those who had not had peri-event panic attacks related to 9/11.63 A study of 116 children aged 5 years and younger in lower Manhattan64 showed that children with a history of other trauma were at a greater risk of anxiety and depression symptoms, and sleep problems 2—4 years after the attacks.



Physical health

Respiratory health of adults

Respiratory illnesses in people exposed to the WTC attack began on a large scale immediately after 9/11. Despite improvement in most individuals since 9/11, thousands continue to have long-term symptomatic and functional problems. Individuals with more intense, prolonged WTC exposures generally experienced more severe and persistent respiratory illness. Clinician-reported or self-reported diagnoses of upper-respiratory symptoms (such as nasal or sinus congestion, sore throat, and laryngitis) and, at lower prevalence, lower-respiratory symptoms (wheezing, tightness of the chest, dyspnoea, asthma and reactive airways dysfunction syndrome) were documented in all exposure groups.9, 10, 18, 27, 31 However, the overall incidence of respiratory illness is difficult to assess because most study populations contain

self-selected subsets of exposed individuals. Firefighters provide a more complete cohort, because there is a documented roster of employees that undergo routine mandatory medical examinations approximately every 18 months. The longitudinal follow-up of this cohort allows the detection of immediate and longer-term patterns of changes in lung function within individuals.

For many affected firefighters, signs of WTC cough appeared immediately after 9/11, with a shift to lower-respiratory problems over the next year.11 In the first year after 9/11, 54% of 10 378 firefighters had a daily cough (*vs* 4% in the year before 9/11), and persisted in 17% in the second year.10 The rates of upper-respiratory symptoms far exceeded those from before 9/11: sore throats (62% *vs* 3%), and rhinosinusitis (45% *vs* 4%) were frequent. Sore-throat symptoms generally subsided for most, but reported rhinosinusitis remained at more than 40% by the fourth year. Lower-respiratory symptoms of dyspnoea (40% vs 3%) and wheeze (34% *vs* 1%) were increased in the year after 9/11 compared with before the attack. Dyspnoea and wheezing were reported more often in the second year and rates remained high through to the fourth year of follow-up.10 In firefighters, arrival time, months of working at the WTC site, presence of respiratory symptoms in the first year, current smoking, and older age on 9/11 were significant predictors of lower-respiratory symptoms 4 years after 9/11.10

Pulmonary function data provide objective physiological evidence of abnormality and complement symptom reporting. Spirometry done a median of 3 months after 9/11 in 12 079 New York City Fire Department responders showed an average decrease of 372 mL in forced expiratory volume in 1 s (FEV1) from their last pre-9/11 measurement, which is equal to the loss expected in 12 years of normal ageing. The proportion of those with FEV1 less than normal increased from 6·8% before 9/11 to 15·3% afterwards.9 A higher rate of decline was correlated with the degree of exposure, as estimated by date of arrival at the WTC site.

After the substantial drop in the first year post-9/11, spirometry in firefighters and emergency medical service workers showed a stabilisation of function, with most having normal, albeit diminished FEV1 values compared with pre-disaster levels (figure 2).12 During the subsequent 6 years of follow-up, FEV1 adjusted for race, sex, height, and age on 9/11 in firefighters who had never smoked decreased by 26 mL per year, and the average percentage of predicted FEV1 did not change.12 Smokers had a similar pattern but at a steeper rate of decline than did non-smokers (figure 2). Although an earlier arrival on 9/11 predicted a decrease in adjusted FEV1 in the first year, it did not predict adjusted FEV1 at the conclusion of follow-up. This finding suggests that xposure predicted initial illness, but that individual host factors such as genomics or non-WTC exposures affected the long-term course.12, 13

Similar symptom and lung-function findings have been reported in other responder groups (such as construction workers, sanitation workers, and volunteers). Of 9442 responders examined between 2002 and 2004 in the New York and New Jersey WTC Clinical Consortium treatment programme, 55% of those who were asymptomatic before the disaster and had worked during the year after the disaster reported upper-respiratory symptoms and 44% reported lower-respiratory symptoms.18 Of people with new or worsening symptoms, prevalence of respiratory disorders increased with exposure to the dust cloud and arrival on 9/11 versus arrival later in September onwards.18 Of 25 748 workers enrolled in the WTC Registry, rates of self-reported newly diagnosed asthma were highest in those who had arrived earliest and those exposed to the dust cloud; longer duration of work and no consistent use of mask or respirator were also predictive of asthma, independent of arrival time.31 Individuals who worked more than 90 days at the WTC site were 74% more likely to report newly diagnosed asthma, independent of arrival time, than were those who worked 1 week or less.31 Similarly, findings from a study of clean-up and recovery workers showed that longer duration of work at the WTC site was predictive of lower-respiratory symptoms.65 Although generally less exposed than many responders because they arrived later at the WTC site, New York State emergency responders with higher exposure to the aftermath of the disaster were more likely to self-report lower-

respiratory symptoms, but not newly diagnosed asthma during the 2 years after 9/11, than were non-exposed employees.66 Lower-respiratory symptoms persisted in some of these workers 5 years after 9/11.67

Even in the absence of data from before 9/11, spirometry has provided useful information for other responder populations. Abnormal spirometry was recorded in 29% of 240 police officers after 9/11,68 and in 28% of 9442 other emergency and recovery personnel.18 Follow-up of 3160 of these responders from the New York and New Jersey WTC Clinical Consortium, between 2004 and 2007, showed a modest mean decrease in FEV1 of only 13 mL per year. At the follow-up study, 24% had abnormal spirometry. Consistency of longitudinal follow-up results in responders in the fire department and the consortium lends support to the conclusion that spirometry results stabilised after the initial decline.

Excess rates of upper-respiratory and lower-respiratory symptoms have also been documented in other populations. Predictors for respiratory symptoms in residents, area workers, and passers-by were exposure to the dust cloud, residential dust and damage, and not having evacuated homes.1, 13, 27 In 20 996 adult WTC Health Registry enrollees in these groups surveyed 5—6 years after 9/11, asthma diagnosed after 9/11 was self-reported by 9% of passers-by, 8% of area workers, and 8% of lower Manhattan residents.27 As with responders, respiratory symptoms in other groups have been reported to persist for several years. For 1898 residents, local workers, and clean-up workers seen at the WTC Environmental Health Center from 2005 to 2008, dyspnoea on exertion (67%) and cough (46%) were the most reported symptoms, followed by nasal or sinus congestion (39%), wheeze (27%), and chest tightness (28%).26 Additionally, as with responders, decreased forced vital capacity and airway hyper-reactivity on methacholine challenge accompanied persistent lower-respiratory symptoms in this group, whose members were similar in age to rescue and recovery populations but had a higher proportion of women.11

Despite the in-depth examination and follow-up of thousands of adults with new and worsening respiratory illness after 9/11, the pathophysiology of these disorders is incompletely understood. Primary spirometry findings along with isolated reports of acute eosinophilic pneumonia,14 granulomatous pneumonitis,69 and bronchiolitis obliterans,70 initially implicated interstitial processes as a disease explanation. However, air trapping and bronchial-wall thickening identified on CT, increased residual volume, airway hyper-reactivity, and improvement with bronchodilators in responders, residents, area workers, and clean-up workers13, 26, 71 suggested that airway obstruction in WTC respiratory disease pathogenesis is a possible explanation. A third factor, distal airway involvement, was implicated by increased airway resistance measurements in a group of WTC-exposed residents and workers with lower-respiratory symptoms and normal spirometry.72 Limitations of some 9/11-related mental health studies—such as self-selection bias, self-report of symptoms and diagnoses, and inability to rule out pre-existing conditions or continuing exposures unrelated to 9/11—also apply to many studies reporting respiratory outcomes.

Respiratory health of children

Few studies have addressed the disaster's effects on children's respiratory health.32, 73 Prevalence of age-specific diagnosed asthma before 9/11 in children enrolled in the WTC Health Registry was similar to that in the 2003 Centers for Disease Control and Prevention's National Health Interview Survey,74 but the rates reported in the registry's 2003—04 survey32 were significantly higher: 18% of 2570 children versus 14% of about 1·8 million children in northeast USA. Asthma diagnosed after 9/11 was reported in 6% of 3184 children enrolled in the WTC Health Registry (11% of children aged 0—4 years on 9/11), and was significantly associated with Asian and Hispanic race or ethnicity and intense dust cloud exposure.32

Injuries

Hospital use was low after 9/11, indicating relatively few severe, acute injuries despite the scale of the disaster. An analysis of emergency room data from five New York City hospitals showed that 790 survivors with injuries sought care within 48 h of the attack, including 279 rescue

workers, and 18% were admitted.75 Inhalation and ocular injuries were most common. In a survey 2—3 years after 9/11, 3672 adult survivors of collapsed and damaged buildings (excluding rescue workers) reported that they had been injured, with ocular injury most common (32%).33 Event-related injury has also been reported to be a risk factor for probable PTSD.27, 29

Gastro-oesophageal reflux symptoms

In cross-sectional studies of 10 378 firefighters, 54% reported gastro-oesophageal reflux symptoms (GERS) 1 year after 9/11, and this proportion was the same 4 years later.10 Furthermore, of 554 WTC rescue and recovery workers in the New York and New Jersey Clinical Consortium, 30% were reported to have GERS and problems in both the upper and lower respiratory systems. GERS was more prevalent in those who arrived at the WTC site within the first 48 h than in those who arrived later.20 In the WTC Health Registry, 24% of 8418 survivors of collapsed and damaged buildings (not including rescue and recovery workers) self-reported heartburn or indigestion 2—3 years after the event.33 GERS are common; a population-based study of 2200 adults in Minnesota reported that 20% of participants had heartburn or acid reflux at least once a week.76 Previous research had documented comorbidity of GERS with asthma,77, 78 mental health disorders,79 and stress80—conditions that are associated with 9/11-related exposures. Other studies have reported coexisting sinus, lower-respiratory, and gastro-oesophageal symptoms in WTC responders.10, 21

Sarcoidosis

Rates of sarcoidosis, a multisystem granulomatous disease of possible environmental aetiology, have been examined in people exposed to the WTC disaster. The incidence of a sarcoid-like granulomatous pulmonary disease in firefighters increased in the first year after 9/11 compared with the average for the previous 15 years (86 per 100 000 *vs* 15 per 100 000), but returned to the rates before 9/11 within 4 years.15 Izbicki and co-workers15 reported 26 cases of this sarcoid-like disorder in firefighters during the 5 years after 9/11; many had asthma-like symptoms and airway hyper-reactivity not seen in sarcoidosis in NYC firefighters before 9/11. The investigators noted that respiratory symptoms and sarcoid-like granulomatous pulmonary disease might be manifestations of one disease or alternatively could be coexisting disorders. A study of 19 756 WTC workers in another cohort22 showed a peak of ten confirmed sarcoid-like cases 2 years after 9/11 (an estimated yearly incidence of 54 per 100 000)—an increase compared with before 9/11, although data are scarce. However, rates are difficult to calculate because the denominator (the total number of responders) is uncertain.23, 33 Furthermore, sarcoidosis is often asymptomatic, and more cases might have been detected as a result of increased chest radiographic screening in health monitoring programmes after 9/11.

Birth outcomes

Proximity to the WTC site on or after 9/11 does not seem to have increased the risk for low birthweight (<2500 g) or preterm deliveries,34, 81, 82 although Lederman and colleagues82 noted a mean decrease in birthweight of 149 g for babies born to 300 mothers living within 2 miles of the site. Berkowitz and co-workers81 recorded a significant risk ratio of 1·9 of intrauterine growth restriction in pregnant women in lower Manhattan on 9/11 or in the 3 weeks after (n=187) than in women about 5 miles from the site (n=2367), after adjustment for race or ethnic origin, infant sex, maternal age, parity, and smoking status.81 Maternal stress and probable PTSD related to 9/11 might have been risk factors for adverse birth outcomes.34,83—85 Two studies of women in New York City showed that those in their first trimester on 9/11 were more likely to have a shorter gestational duration than were those in their second or third trimester, irrespective of where they lived.34, 82 A similar effect was reported during the same period in 2000, a year before the attack, which suggests that season might have affected length of pregnancy.34 Researchers who examined umbilical cord blood samples did not find clear associations between 9/11 exposures and birth outcomes or child neurodevelopmental effects.86—88

Comorbidity

Two studies27, 89 have described coexisting mood and anxiety disorders in exposed individuals. In

enrollees in the WTC Health Registry who screened positive for chronic PTSD symptoms after the disaster, a third also reported a diagnosis of depression since 9/11.27 Responders with probable PTSD had 13·9 times higher odds for probable depression and 9·2 times higher odds of panic disorder than those without PTSD; comorbid responders were 40—86 times more likely to have emotional disruption of function according to the Sheehan disability scale than were those without PTSD, panic disorder, or depression.16

The burden of co-occurring physical and mental illness in individuals directly exposed to the 9/11 attacks was likely to be high because of the concurrent environmental and psychologically traumatising exposures. Few studies have examined both issues, although one report from the WTC Health Registry27 suggested substantial comorbid respiratory illness and PTSD: 36% of 3800 adults who reported asthma diagnosed after 9/11 had probable PTSD in a 2006—07 survey.

Possible late-emerging disorders

Late-emerging health disorders (such as cancers, which have long latency periods) and premature deaths that might be associated with exposure to the attacks are being studied. The dust and debris contained known carcinogens; thus clinicians and researchers will need to continue to monitor exposed individuals. One case series has been published on multiple myeloma,24 but no population studies on 9/11 exposure and cancer outcomes or mortality have been reported at the time of this Review.

Conclusion

10 years after 9/11, short-term and medium-term health outcomes are generally consistent across studies for the main mental and physical health conditions. The prevalences of PTSD and respiratory illness, including irreversible loss of pulmonary function, were substantial and were strongly associated with direct exposure to the 9/11 attacks in adults. The links between direct exposure to the attacks and several other disorders, such as depression, anxiety, substance use, GERS, and sarcoidosis, need further study.

Investigations into the health effects of the 9/11 attacks have unique strengths, including the presence of several large cohorts that have been followed up prospectively. For example, a unique longitudinal large-scale assessment of respiratory function was possible in firefighters—a group that was directly exposed to the dust cloud and debris after the attacks. Loss to follow-up will be a challenge for many of the large cohorts being followed, and efforts to minimise this loss will be crucial to ensure the validity of future findings.

The 9/11 attacks were unprecedented in many ways (eg, the demands that they placed on the community of investigators studying their health effects) and limitations of the available work mainly arise from the novelty of work done. Studies are limited by the absence of quantitative methods to measure exposure, challenges in estimation of relevant denominators (ie, the size and composition of populations affected by the disaster), and frequent reliance on self-report of symptoms and diagnosed health disorders. Most investigations started data collection months or years after the disaster, which possibly introduced error attributable to recall bias. Furthermore, systematic data collection for population studies started after 9/11 for all groups apart from New York City firefighters, resulting in little information about associated factors relevant before 9/11. Pre-9/11 occupational hazards, trauma, or psychopathology could have been important drivers of the pathological changes documented in the aftermath of the attacks.

Despite much work into the health effects related to the 9/11 attacks, several gaps remain. A few studies have been done for anosmia,90, 91 sleep apnoea,92, 93 and cardiac disease,94—96 but more research is needed. Additional investigation is needed to examine comorbidity, including interaction of co-occurring mental and physical health problems, and multiple mental health disorders. More studies are needed on associated factors for comorbid mental health conditions, and how this comorbidity affects quality of life, disability, and risk for increased substance use. Treatment of disorders related to the disaster should be assessed, particularly treatment effectiveness for both physical and mental health conditions, and best practices. Information is scarce about who accessed treatment services, how to reach those still in need, and the burden of

9/11—related illness on the local and national health-care systems.

Published reports of the health effects of the 9/11 attacks provide several lessons for research into future disasters. Accurate and replicable assessments of exposures are highly desirable after such events. These assessments are relevant to studies of both mental and physical health. Most epidemiological studies so far have relied on qualitative or semiquantitative exposure assignments derived almost entirely from questionnaires completed by the study participants themselves. Ideally, standardised data collection methods should be used to measure exposures from the onset of an environmental disaster, and rigorous tracking of workers' and volunteers' shifts would improve estimates of both the total exposed population and their extent of exposure. Additionally, recall bias might be minimised by rapid identification and assessment of either the entire exposed group or a representative sample. This fast identification has been possible after other disasters, particularly after the 1995 bombing of the Murrah Building in Oklahoma,97 but was infeasible in view of the scale of the 9/11 attacks and because of the many different groups of investigators studying their effects. Furthermore, systematic collection of information about pre-existing physical and mental health conditions and on previous traumatic exposures would help to assess whether new or worsening post-disaster health effects are attributable to a specific event.

Research into 9/11 also provides insight into future disaster response efforts. Interventions that might reduce physical and mental health effects in the short and medium terms after disasters are immediate outreach, screening, and treatment of high-risk populations with targeted, exposure-specific interventions to prevent long-term mental health sequelae; early and consistent use of appropriate respirators when environmental hazards cannot be controlled; and disaster preparedness training and shift rotations to enable shorter work duration of rescue workers.

Finally, lessons from existing research can provide guidance for future studies of illness related to 9/11. First, in view of the challenges in the identification of appropriate, unexposed external comparison populations for the unique cohorts studied after exposure, internal comparisons are often useful. Many of the 9/11 investigations have shown dose-response relations with use of internal comparison groups, with increased exposure associated with a greater likelihood of adverse health effects. Second, as researchers investigate late-emerging and rare disorders, consistency of findings across studies becomes even more important in assessment of associations between exposures related to 9/11 and health outcomes, even when different methods are used. Third, more information is needed to explain the pathophysiology of WTC-related illnesses. Fourth, validation studies such as pulmonary function testing and medical record reviews can help to support self-reported symptoms and diagnoses, and to provide objective measures of the progression of health disorders over time. The continued follow-up of exposed adults and children is needed to document the trajectory of illness, and to detect the onset of illnesses related to 9/11 of longer latency.

Search strategy and selection criteria

We searched PubMed for reports in English between Sept 11, 2001, and February, 2011, with the search terms “September 11 Terrorist Attacks”, “World Trade Center”, “WTC”, and “September 11, 2001”. To ensure comprehensiveness, we compared the results of our search to relevant reviews. In view of the amount of work on this topic, we could not comprehensively include all peer-reviewed reports. Therefore, in this Review we summarise the information from the largest and most representative studies, in addition to studies that cover a topic not adequately addressed in previous papers. We assessed which papers merited inclusion on the basis of study methods used. The webappendix contains more information about each study discussed.

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The costs of war

By Hugh Gusterson

Source: http://thebulletin.org/web-edition/columnists/hugh-gusterson/the-costs-of-war

Military responses to problems have a way of creating all sorts of new problems. The tenth anniversary of the 9/11 tragedy offers an opportunity to reflect on the costs and benefits of the wars the United States initiated against Iraq and Afghanistan after the terrorist attacks. A comprehensive new study, "Costs of War," sponsored by Brown University (and with which I have been affiliated) suggests that the costs have been wildly out of proportion to the benefits. The study should be required reading for political commentators and national security policymakers across the country. Presidential speechwriters' inspiring words about the courage of American soldiers and the success of the "surge" notwithstanding, it is hard to find any metric by which one can judge the wars in Iraq and Afghanistan as successes. In money and in human suffering, the expense of the wars has been appalling -- as the Costs of War website makes

clear, with a mixture of snappy graphics and carefully sourced research.

We could pull every last soldier out of Iraq and Afghanistan tomorrow, but the costs of caring for them will keep climbing until at least 2040.

The most obvious damage has been financial. Of all the nation's wars, only World War II cost the United States more than the wars in Iraq and Afghanistan. Although leading neoconservatives from Paul Wolfowitz to Ken Pollack predicted that the war in Iraq would largely pay for itself, the Nobel Prize-winning economist Joseph Stiglitz and his collaborator Linda Bilmes estimate that, in funds already disbursed or committed, the wars in Iraq and Afghanistan have so far cost the American taxpayer a whopping $3.2 trillion -- at least.

Given the current preoccupation with the deficit in Washington, it is noteworthy that this $3.2 trillion includes $200 billion in interest payments incurred on these wars since 2001. That's because the Bush administration decided to pay for these wars by borrowing rather than by taxing the people on whose behalf the wars were fought. If Congressional Budget Office predictions are borne out, the United States will spend another $800 billion in war interest by 2020.

This hemorrhaging of money has collateral effects on the US economy. All that government borrowing makes it harder for consumers to borrow money, pushing payments on the average American's mortgage up by $600 a year, for example. The wars have also driven up the price of oil, thus magnifying the recession, and they have siphoned off over $3 trillion that could have been invested in the renewal of US infrastructure. Or in jobs: $1 million spent on the military creates 8.3 jobs, whereas $1 million spent on education creates 15.5 jobs and $1 million spent on health care creates 14.3 jobs. If we estimate that the Pentagon spent $130 billion a year directly on the wars, that money, if spent at home instead, would have created 900,000 US jobs in education or 780,000 US jobs in health care.

And then there are the dead, the injured, and the displaced. So as to avoid charges of sensationalism, the Costs of War project deliberately uses conservative numbers where estimates differ, but even the conservative numbers are horrifying. While some studies put the numbers of Iraqi dead higher than one million, the Costs of War project goes with the lower number of 225,000 individual Afghans and Iraqis who are known to have lost their lives; 137,000 of these were civilians. Almost eight million Iraqis and Afghans -- a number as large as the combined populations of Connecticut and Kentucky -- are thought to be displaced. At 6,000, the number of American troops killed is much smaller, but it is still more than twice the number lost in the terrorist attacks that so traumatized the country a decade ago. And each dead soldier leaves behind a hole in someone's heart.

If the newspapers periodically remind us of these slain American soldiers by showing us the "faces of the fallen," the injured are less visible, but the cost of caring for them will only increase. Nearly 100,000 American soldiers have been officially wounded in Iraq and Afghanistan, but many injuries, such as post-traumatic-stress disorder, may not manifest until after deployment. More than 522,000 veterans of our Middle Eastern wars have now filed disability claims. Based on prior experience in World War II, Korea, and Vietnam, we know that the health care costs of such veterans do not peak until 30 to 40 years after the wars are over. In other words, we could pull every last soldier out of Iraq and Afghanistan tomorrow, but the costs of caring for them will keep climbing until at least 2040. These costs are expected to total between $600 billion and $1 trillion.

Of course, some of these veterans will pay the costs of war in other ways: The military suicide rate is *twice* the civilian suicide rate, and veterans are *75 percent* more likely than civilians to die in car crashes. An ongoing US government survey has found that over a quarter of veterans of the Iraq war are abusing alcohol, and the rate of abuse of prescription drugs by military veterans is now six times greater than it was in 2002.

Meanwhile, two million American children have lived in recent years with the stress of a parent deployed to Iraq and Afghanistan. Some have seen parents return from war with amputated limbs, brain injuries, and post-traumatic-stress disorder. These children, disproportionately from minority communities, are more likely than their civilian counterparts to have problems at school, to

suffer from depression, and to exhibit behavioral disorders. They represent another kind of interest on our investment in war -- one that we will be paying back for a long time. As we pare back social services as part of federal budget cuts, many of these children and their families will struggle with their problems on their own -- an intolerable externalization of the costs of war for a society that claims to be committed to family values.

When we hear our leaders talk about "military operations" and "surgical strikes," it is tempting to think of military force as a powerful but precise tool for achieving objectives like the removal of Saddam Hussein or the defeat of the Taliban. We have learned from Iraq and Afghanistan (having apparently forgotten the earlier lesson administered by the Vietnamese) that the tools of war cost a lot to wield, that they end up killing many innocent people as well as their intended targets, and that the blowback from war leaves a trail of devastated and diminished human beings who struggle with the consequences of war for decades after the last soldiers have laid down their weapons.

As Dana Priest and William Arkin say in their fine new book, *Top Secret America*, Americans "have shelled out billions of dollars to turn the machine of government over to defeating terrorism without ever really questioning what they were getting for their money." The tenth anniversary of 9/11 is a moment for reflection, yes, but it is also an opportunity to start asking some hard questions.

It's Official: The "Children of 9/11" Are Spoiled Dhimmi Morons & Propagandists

By Debbie Schlussel

Source: http://www.debbieschlussel.com/41715/its-official-the-children-of-911-are-spoiled-dhimmi-morons-propagandists/

I'm sure I will get loudly attacked by every moron on the left (and right). But if the kids I saw on TV last night are at all representative of the children who lost a parent on 9/11, they are a bunch of spoiled morons, politically correct dhimmis, and Islamic propagandists.

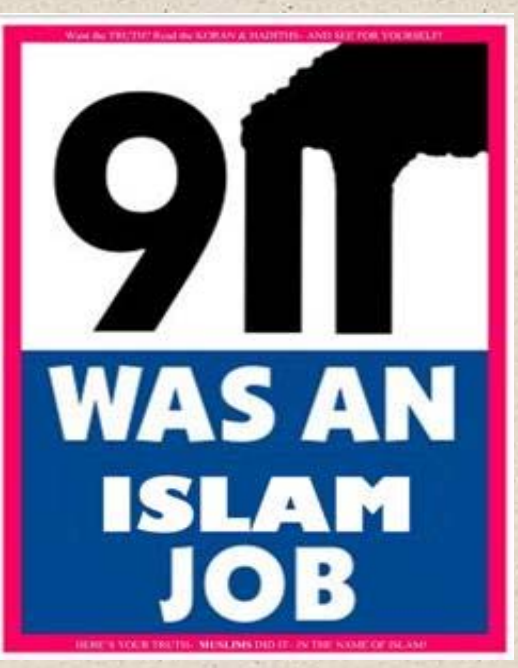
Last night, after telling you about the NBC special, "The Children of 9/11," I watched it. I predicted it would cry over Muslims as "victims" of 9/11 and never mention that they were the perpetrators (or who the perpetrators were at all). And it was even more "vomitous" than I originally diagnosed before watching it. Osama Bin Laden's ghost is smiling from his watery grave about his victory over America and the West–a victory that keeps on giving.

Plenty of kids lose a parent. Their families don't get a $4 million windfall as compensation (and, instead, they are struggling). And they don't go around telling the rest of us not to hate their parents' murderers because not all murderers are bad guys, that just a few hijacked their religion. But that's what these kids did, last night, and not just the Muslim ones.

About 3,060 kids lost a parent in the 9/11 terrorist attacks. I hope and pray that the eleven we saw last night do not represent them. If even they cannot face who it is that murdered their parents, I doubt the rest of America's kids will. And that's yet another reason why we are doomed against the Islamic threat to the West. And, come on, was there not one American kid who joined the U.S. Army or went to West Point after his father was murdered on 9/11? If there was, he wasn't deemed the kind of person whose agenda needed to air on NBC's "Children of 9/11."

Hosted and narrated by Mariska Hargitay, the NBC special showed us a child of 9/11 who is paying tribute to her father by becoming a . . . pro wrestler? Huh? Yup, that's how Thea Trinidad a/k/a "Rosita" is remembering that some ghost took her father, a wrestling fan and amateur wrestler, on 9/11. I say, "some ghost," because the men who perpetrated the 9/11 attacks were 19 Islamic terrorists, but that's never mentioned. Not even once in the entire hour.

Then, there's Caitlin Langone, who remembers her father and what happened to him by bleaching her hair pastel green and getting tattoos all over her body. Are you frickin' kiddin' me? This is how they remember the 9/11 attacks? Morons. Spoiled morons. But, hey, $4 million buys a lot of tattoos and sexy pro wrestling costumes and very little in the way of learning about the Islamic threat that took their parents. I feel sorry that these kids lost a parent, but if they cannot face facts about why their parents are gone and who did it, I cannot feel too bad for them, as they are beyond help. It's not the circumstances that happen to you. It's what you do about it.



On "The Children of 9/11," we're lectured in Islamic propaganda by Ms. Hargitay, who tells us about the "60 innocent Muslims" who died in the 9/11 attacks. How the heck does she or anyone know they were "innocent"? Did they ask their ghosts to condemn Hezbollah and HAMAS? A lot more Jews and Christians and people of many ethnic groups died. But none of them gets a special mention like Muslims. In fact, it appears that no Jewish kids of 9/11 were featured. Why? Maybe NBC believes in the Muslim BS that Jews stayed home on 9/11 because they knew of the attacks (absolutely false).

Then, we are shown the Chowdhury family and their mother Baraheen Ashrafi. We're told how their dad, Mohammed, was a poor waiter in the World Trade Center and how Farquad and Fahina Chowdhury, the kids, are upset that so many people area against Islam and think Muslims did the attacks. Um, guess what? Muslims did perpetrate the attacks, you idiots.

But, even worse than the Muslims who tell us how peaceful and innocent they are (but aren't asked to condemn a single Islamic terrorist group), are the Burnett girls. Their father, Thomas, was on United Flight 93, which crashed in Pennsylvania after passengers fought off their Muslim attackers and foiled their plans. But the Burnett girls, Halley, Madison and Anna Clare Burnett, want you to know that Muslims are peaceful and innocent and that their father would not want us to think negatively about Muslims. They also make sure to tell us that Muslims are loyal U.S. citizens and innocent just like the rest of us. Do you think their father's soul is nodding in agreement from his mass Islamic-made grave in Pennsylvania? Or is he turning over in his grave that while his family got $4 million, it didn't do much good in educating them about his murderers and the threat their co-religionists pose to America?

Another 9/11 orphan, Rodney Ratchford, is struggling to get by, even though he was apparently his mother's sole surviving immediate family member. Why? What happened to the $4 million he got? The special didn't really address that, after raising the question.

Like I said, these are spoiled brats, morons, and propagandists, not brilliant or insightful people. They were the ones whose parents died on 9/11 because of fate, not because they were destined to become great spokespeople about those who murdered their parents and the threat their co-religionists continue to present and escalate on U.S. shores.

But it begs the question: if the children of the victims of 9/11 cannot even remember what happened to their parents–and more important, who did it–how can we expect that of the rest of the country?

Answer: we can't. And, again, that's why we're doomed. Kids who lost their parents to Nazis in World War II–and the rest of the American people–knew who took their lives.

Now, we are just a nation of idiots. Some of the idiots are $4 million richer, though. And they have tattoos and green hair.

A 300-pound memorial to 9/11 rescue dogs, part of 9/11 Memorial Park in Lindenhurst, was discovered toppled on Friday morning. The statue was modeled on Hansen, a German shepherd who searched through the rubble of the World Trade Centers after the terrorist attacks on Sept. 11, 2001. Hansen died in 2004. (May 27, 2011)

Photo Credit: Jim Staubitser

After the 911 memorial service by Miami Dade firefighters at Tropical Park in Miami, "Shiloh," a 6-week-old golden retriever has her picture taken on the K9 memorial at the park. Shiloh is in training with Miami Dade's Captain P.J. Parker to be a search and rescue dog. In the days after the Sept. 11 attacks in New York and Washington, search and rescue dogs from all over the U.S. and Canada were called to service at the sites to help located both survivors and human remains.

Photo: Joe Rimkus Jr., Miami Herald

The Israelite Connections of the Taliban

By Shalva Weil

Source:http://www.isn.ethz.ch/isn/Current-Affairs/ISN-Insights/Detail?lng=en&id=132736&contextid734=132736&contextid735=132724&tabid=132724&dynrel=4888caa0-b3db-1461-98b9-e20e7b9c13d4,0c54e3b3-1e9c-be1e-2c24-a6a8c7060233

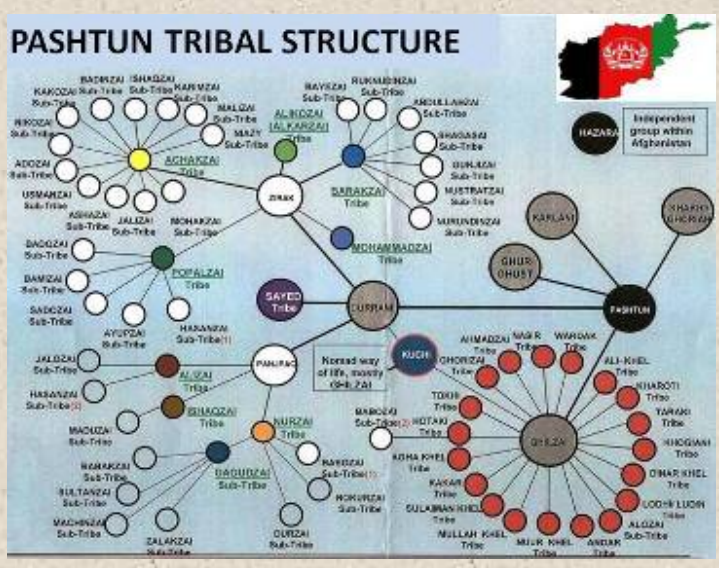
It is a little known fact that the majority of the Taliban, who are largely made up of members of the Pashtun or Pathan tribes, are actually of Israelite origin. While the older generation of Pashtun did not hide the fact of their Israelite descent, some of the younger generation have suppressed this knowledge in light of the present political constellation.

It is difficult to believe that a decade has passed since the 9/11 attacks in which nearly 3,000 innocent people died in four coordinated suicide attacks perpetrated by al-Qaeda. The United States reacted by invading Afghanistan and declaring war against the Taliban, an extremist Islamic terrorist movement, which had harbored al-Qaeda.

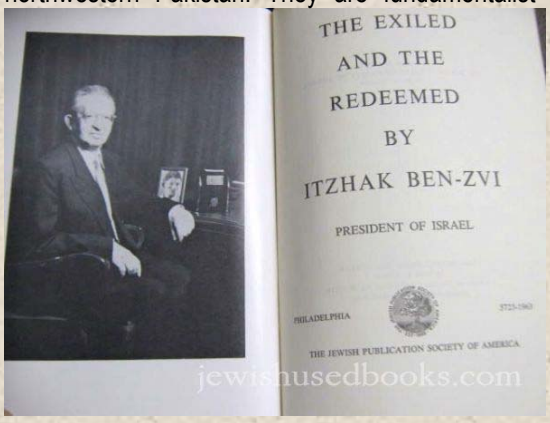
A decade after the suicide bombings, one of the more extraordinary aspects of the attacks is the connection with Israel. In 2004, al-Qaeda's leader Osama bin Laden blamed the US' support of Israel as one of the causes for the movement's terrorism. However, the fact that the majority of the Taliban, who make up the backbone of al-Qaeda, themselves claim Israelite origin is relatively unknown.

The Taliban operate in Afghanistan and northwestern Pakistan. They are fundamentalist Sunni Muslims, who wish to impose their brand of Islam and their interpretation of Sharia law on others. They despise western democracy and secularism, are notorious for their treatment of women and ferociously oppose the US and Israel.

The Taliban are largely made up of members of the Pashtun or Pathan tribes, who constitute the largest single tribal grouping in the world, numbering over 15 million. They are divided into



distinct local tribes reminiscent of the names of the Lost Ten Tribes of Israel. According to the Bible, the Ten Lost Tribes were taken captive by the Assyrians in the eighth century BCE, while the inhabitants of the kingdom of Judah remained in Israel. The Ten Tribes were exiled to "Halah, Habor, the cities of Medes and the River Gozan", in the very geographical and cultural area in which the Pashtuns live. The fate of the Lost Israelites has always been something of an enigma, and discussed throughout the ages in the Talmud and other Jewish texts, but Jews and Christians alike have generally believed that at the "end of days", they would eventually be reunited with the descendants of the tribe of Judah.



The first president of Israel, Itzchak Ben-Zvi, in his book, *The Exiled and the Redeemed*, devoted a whole chapter to the purported Israelite origins of the Pashtuns. He explained that the Pashtun tribe Rabbani could be the lost Israelite tribe of Reuben; Shinwari could be Shimon; Daftani could be a corruption of Naftali; Jajani – Gad, Afridi – Ephraim, and so on. He quoted local Jews from Afghanistan who had reported to him in the early 1950s that these fierce tribesmen wore an embroidered *Hanukka* (Jewish Festival of Lights) lamp on their backs. He had heard that they wrapped themselves in a *tallith* (prayer shawl), and lit candles on Friday night. They also wore, and to this day, insist on keeping their *pe'ot* (sidecurls). Abraham Benjamin, a Jew from Herat in Afghanistan, reported that "According to the rituals are the same…I would be amazed to find out whether there is a gene link in my ancestry to Israel".

The Pashtun, even if they are virulently anti-Zionist, accede that they are the "sons of Israel". When I interviewed members of the Yusuf-Zai (sons of Joseph) tribe years ago in the orchards of Kashmir, they related their origins with pride. Even today, many Pashtun agree that they are Israelites, even if they generally disassociate themselves with the modern state of Israel.

According to Pashtun tradition, King Saul bore a son by the name of Jeremy, whose birth is not recorded in Jewish texts. Jeremy fathered a royal prince called Afghana, whose descendants fled to Jat in Afghanistan. In 662 CE the descendants of Afghana were converted to Islam at the explicit

tradition current among the Afridis (one of the Pashtun sub-tribes), they are descendants of the Israelites, more particularly, the sons of Ephraim."

In a recent email from a member of the Pashtun tribes, the enquirer (anonymous for obvious reasons) wrote: "I have always been curious about my ancestry…I was told very early on in my life that we are like the Jews and that our customs and

request of Mohammed. The mission was accomplished by his emissary Khalid ibn al-Walid, who returned to his master with "proof" of his activities – 76 converts and seven leaders of the "Children of Israel", including a descendant of Afghana named Kish. Kish subsequently changed his name to Ibn Rashid, and he was entrusted by Mohammed with the task of spreading the Islamic

word. Many of today's Taliban terrorists claim descent from Ibn Rashid.

Many Afghan and western scholars alike have made detailed investigations into the subject from historical, anthropological and philological points of view, and provided "proofs" of the Israelite origins of the Pashtun. Some write that they "look" Jewish. They have sallow skins and dark hair and eyes, are of medium stature, wear beards and sidecurls and have a typically "Jewish" profile. Others claim that they also observe Israelite/Jewish practices. They perform circumcision on their boys near the eighth day; the women observe purification laws prescribed in the Torah; and they wear amulets, which some people claim contain the words of the *Shema* – "Hear O Israel, O Israel, the Lord is our God, the Lord is One."

For some, the Pashtuns' ancient code of hospitality, known as *Pukhtunwali*, by which generosity (*khegara*) and protection of guests are paramount, is sufficient proof that they are affiliated with Israelites and hence Jews. This code lays down the guiding principles behind the Pashtuns' refusal to give up bin Laden, who sought sanctuary in Pakistan, until he was eventually shot down by US gunmen in May 2011. Similarly, al-Qaeda's second-in-command, Atiyah Abd al-Rahman, killed by US forces on 22 August 2011, had sought refuge and was operating out of traditional Pashtun territory in north Waziristan in Pakistan.

Like the ancient Israelites, revenge (*badal*) is one of the driving forces of Pashtun society. If attacked, or pride wounded, the Pashtun, who make up the rank and file of the Taliban, will partake in a *jihad* (holy war) against the invaders. They succeeded with the British in the 19 th century. They repulsed the Communists; and they are still resisting the American coalition.

The older generation of Pashtun did not hide the fact of their Israelite descent, but recently some (though certainly not all) of the younger generation have suppressed this fact which could render them highly unpopular in the present political constellation.

Dr Shalva Weil is a Hebrew University anthropologist and a specialist on the Ten Lost Tribes of Israel.

Holes remain in flight school scrutiny after 9/11

By Harry R. Weber

Source:http://www.boston.com/news/nation/articles/2011/08/30/holes_remain_in_flight_school_scrutiny_after_911/

Ten years after the 9/11 attacks, government screening has made it harder for foreign students to enroll in civilian flight schools as a handful of the hijackers did, banking on America being inviting and a place to learn quickly.

But the most rigorous checks don't apply to all students and instructors, so schools and trainers have to be especially alert to weed out would-be terrorists.

"Prior to 9/11, I wouldn't have had the phone number and name of my local FBI agent posted on my wall. I do," said Patrick Murphy, director of training at Sunrise Aviation in Ormond Beach, Fla., near Daytona Beach.

Hundreds of U.S. flight schools fiercely compete for students. In Florida, some still pitch the good weather as a way for students to fly more often and finish programs faster. The 9/11 hijackers sought out U.S. schools partly because they were seen as requiring shorter training periods.

Florida schools have reason to be careful: Three of the 9/11 hijackers were simulating flights in large jets within six months of arriving for training in Venice, Fla., along the Gulf Coast. Mohamed Atta, the operational leader of the hijackings, and Marwan al Shehhi enrolled in an accelerated pilot program at Huffman Aviation, while Ziad Jarrah entered a private pilot program nearby.

The terrorists obtained licenses and certifications despite rowdy behavior and poor performance at times.

The U.S. commission that investigated the attacks said in its report that Atta and Shehhi quickly took solo flights and passed a private pilot airman test. The two later enrolled at another school, where an instructor said the two were rude and aggressive, and sometimes even fought to take over the

controls during training flights. They failed an instruments rating exam. Undeterred, they returned to Huffman. Meanwhile, Jarrah received a single-engine private pilot certificate.

In this photo taken Aug. 24, 2011, Patrick Murphy, Director of Training, looks out on the flight line from a hangar, at the Sunrise Aviation flight school in Ormond Beach, Fla. Ten years after the 9/11 attacks, government screening has made it harder for foreign students to enroll in

civilian flight schools like a handful of the hijackers had done, banking on America being inviting and a place to learn quickly. (AP Photo/John Raoux)

Hani Hanjour obtained his private pilot license after about three months of training in Arizona. Several more months of training yielded a commercial pilot certificate, issued by the Federal Aviation Administration. In early 2001, he started training on a Boeing 737 simulator. An instructor found his work substandard and advised him to quit, but he continued and finished the training just 5 1/2 months before the attacks, the commission said. Today, it would be tougher for the four men to enter U.S. flight schools.

There is a stricter visa process for foreign students seeking flight training in the U.S. They cannot start until the Transportation Security Administration, created after Sept. 11 to protect U.S. air travel, runs a fingerprint-based criminal background check with the FBI's help and runs their names against terrorist watch lists. TSA inspectors visit FAA-certified flight schools at least once a year to make sure students have proper documentation verifying their identities and haven't overstayed their visas. Plus, TSA shares intelligence with other agencies and has other layers of security to catch people before they can do harm even if they slipped through the cracks and were able to get flight training in the U.S. The stepped-up measures involving flight schools are not foolproof or uniform, however. There are numerous flight instructors with access to planes and simulators who don't all get an annual TSA visit, and are subject only to random TSA inspections if they train only U.S. citizens. The TSA has access to a database of all student pilots that is maintained by the FAA. But TSA said it only runs the names of U.S.-citizen students against watch lists, and not necessarily before those students can start their programs.

TSA said the fingerprinting and criminal background checks done on foreign students before they can enter U.S. flight schools are not done on U.S. citizens. TransPac Aviation Academy in Phoenix tells domestic applicants they need proof of citizenship, a high school diploma or college transcripts, a medical card, a driver's license and any pilot licenses already held. Other schools do the same, said Tom Lippincott, TransPac's vice president of business development. And one security measure never employed by the government, despite interest from the 9/11 commission, was requiring that transponders that help officials locate commercial planes can't be turned off as the hijackers did. The FAA said if there is an electrical fire or malfunction, pilots must be able to turn off the transponder for safety reasons. The shortcomings have led schools to self-police. Andre Maye, vice president of administration at Phoenix East Aviation in Daytona Beach, pays attention to red flags including inconsistencies in addresses applicants provide and discrepancies on financial statements. He monitors the size of wire transfers from students when they pay for their tuition, which can

total $46,000 or more, and looks for consistency in the transactions. James Coyne, president of the National Air Transportation Association, a trade group for aviation service businesses including flight training companies, said the industry is open to more rigorous and uniform vetting of students.

The safeguards in place haven't deterred foreign students from flocking to the U.S. -- Sunrise Aviation's Murphy said the majority of students are international at many flight schools, including his. They come because the training industry is more developed and efficient than programs at home. Also, pilot hiring in the U.S. is stagnant, while growth in Asia has fueled a need for pilots there. Students often come to the U.S. with their own money or financing.

Akshai Stephen, 27, of New Delhi, has been at Sunrise about five months. He said the month it took him to go through the approval process and start training didn't discourage him. "What I thought was, just tell the truth, `I want to fly. I want to fly,'" he said. "If you are truthful and have good intentions, you have nothing to worry about." Of the 41 recommendations in the 9/11 commission's report, none specifically addressed flight schools. Thomas Kean, the former New Jersey governor who chaired the commission, told The Associated Press the feeling at the time was that the federal government already was working to close that loophole. Huffman Aviation, where Atta and Shehhi trained, closed after the attacks. Owner Rudi Dekkers said in a recent interview that considering what he knew 10 years ago, there is nothing he could have seen that would have alerted him to what his students were planning. And despite the enhanced government screening today, he isn't convinced the same thing couldn't happen at another school. "You have someone who doesn't behave, you think that makes them a terrorist?" Dekkers asked. "Then half the country is a terrorist."

Major Depressive Disorder Following Terrorist Attacks

A Systematic Review of Prevalence, Course and Correlates

By José M Salguero; Pablo Fernández-Berrocal; Itziar Iruarrizaga; Antonio Cano-Vindel; Sandro Galea

Source: http://www.medscape.com/viewarticle/747120?src=ptalk

Abstract and Introduction

Abstract

Background: Terrorist attacks are traumatic events that may result in a wide range of psychological disorders for people exposed. This review aimed to systematically assess the current evidence on major depressive disorder (MDD) after terrorist attacks.

Methods: A systematic review was performed. Studies included assessed the impact of human-made, intentional, terrorist attacks in direct victims and/or persons in general population and evaluated MDD based on diagnostic criteria.

Results: A total of 567 reports were identified, 11 of which were eligible for this review: 6 carried out with direct victims, 4 with persons in general population, and 1 with victims and general population. The reviewed literature suggests that the risk of MDD ranges between 20 and 30% in direct victims and between 4 and 10% in the general population in the first few months after terrorist attacks. Characteristics that tend to increase risk of MDD after a terrorist attack are female gender, having experienced more stressful situations before or after the attack, peritraumatic reactions during the attack, loss of psychosocial resources, and low social support. The course of MDD after terrorist attacks is less clear due to the scarcity of longitudinal studies.

Conclusions: Methodological limitations in the literature of this field are considered and potentially important areas for future research such as the assessment of the course of MDD, the study of correlates of MDD or the comorbidity between MDD and other mental health problems are discussed.

Background

The scientific study of the psychological consequences of disasters has come a long way in the last decade.[1,2] Different reviews of the topic have shown that disasters are a relatively common event in western countries[3] capable of affecting the population in which they occur as a whole.[4]

Of the different types of disasters, terrorism occupies a special place in the literature. Terrorism is defined as "the intentional use of violence against one or more non-combatants and/or those services essential for or protective of their health, resulting in adverse health effects in those immediately affected and their community, ranging from a loss of well-being or security to injury, illness, or death".[5] The results of several revisions of the consequences of disasters have shown that terrorism may be associated with a greater risk of psychopathology than other disasters.[6] This characteristic, along with the increase in terrorist attacks that have struck various cities of the USA and Europe in recent years, have turned terrorism into a problem of interest, both for clinicians and for public health professionals.

A substantial body of research, much of which has been carried out after the September 11, 2001 terrorist attacks in New York and the March 11, 2004 terrorist attacks in Madrid, has documented the extent to which terrorism can affect the mental health of populations.[3,6] Of the specific psychiatric disorders studied, literature has been mainly focused on posttraumatic stress disorder (PTSD), with several reviews documenting the course and correlates of this disorder [for a review see[1,3]]. However, less is known about major depressive disorder (MDD).

The study of MDD may facilitate a more complete understanding of the psychopathological burden of trauma, which may help to design more effective population-level mental health interventions in the aftermath of terrorism.[4,7–9] Terrorist attacks can produce reactions of intense fear and horror and generate a profound sense of loss for the people involved, both of which may underlie the development of MDD.[10,11] Moreover, a positive association between the occurrence of stressful events and the probability of developing a MDD has been consistently documented in the literature [for a review, see [12,13]]. Therefore, it is plausible that MDD prevalence may increase after disasters. This, together with the high prevalence of MDD in the general population[14,15] and the substantial personal, social, and economic consequences of this disorder,[16–18] suggests that MDD may be an important focus in the study of the psychological effects of terrorism.

However, with few exceptions,[8] most of the data on MDD after terrorist attacks has been gathered in studies that also present data on other psychological problems (typically reporting MDD and PTSD jointly) and carried out in the context of a very specific event, at a given time and place, without comparing the results obtained with other prevalence rates. On the other hand, there is heterogeneity in the methodology used to assess MDD, with several studies using scales that assess the frequency or intensity of certain symptoms associated with MDD (and not diagnostic measures), that may hamper the correct prediction of expected rates of MDD. All this limits our ability to draw generalizable inferences about MDD after terrorist attacks and suggests that a systematic review may make an important contribution to the field.[6]

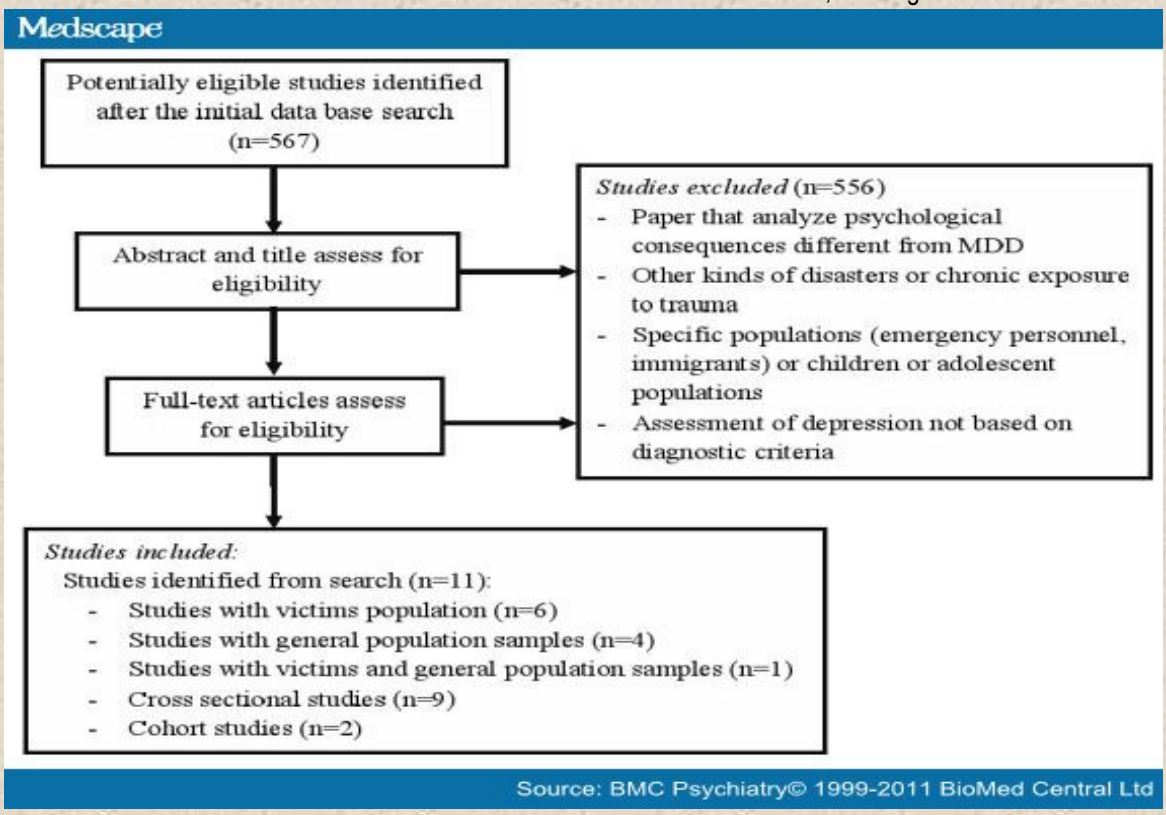
We present a review of the empirical research focused on the study of MDD as a consequence of terrorism in two specific populations: direct victims (people who experienced the event in first person either because they were injured in the attack, or suffered material losses, or lost relatives or close friends[19]) and indirect victims (people in the general population). Two specific goals were established for the review: (a) to systematically review the results of studies that analyzed the prevalence and course of MDD following terrorist attacks and (b) to document the main correlates associated with this disorder. Our intention is to draw inferences that may help future research in the field and potentially guide the implementation of practical interventions when terrorist attacks do occur.

Method

Selection Criteria

Type of Event Studied Our review focused only on studies carried out after human-made, intentional, terrorist attacks, limiting our search to studies that were designed and conducted at a specific time and place and not including, therefore, investigations on the impact of other kinds of disasters (e.g., natural disasters) or chronic exposure to trauma (such as works carried out in times of war).

Figure 1. Flow chart of the studies included in the review



Type of Population Assessed We focused our review on studies carried out in adult populations, including either persons in the general population or persons directly affected by a terrorist attack. We excluded work that focused on specific population subgroups such as emergency personnel, children, etc.

Type of Assessment Methodology Used Several studies in the field have adopted a dimensional approach, using scales that assess the frequency or intensity of certain symptoms associated with MDD. These studies preclude a diagnosis of MDD. Although some studies overcome this problem using different cut-off points to document MDD prevalence,[20,21] this can lead to different conclusions depending on the cut-off point used[22] and to an overestimation of the presence of this disorder in the population.[23] Moreover, it is difficult compare the prevalence of MDD reported by investigations when a dimensional approach is used. Therefore, we only took into account the assessment of MDD based on diagnostic criteria, mainly based on the DSM international classification. Also, although some studies in the field use the term "incidence" rather than "prevalence", none of them were designed to ensure that persons were free from psychopathology before the occurrence of the terrorist attack. Therefore, and following other authors,[1,3] we shall use the term prevalence in general throughout.

Search Strategy

Figure 1 presents the flow chart for the selection of the included studies. A four-step procedure was used. First, a search of the peer-reviewed literature in the PsycINFO and Medline databases was conducted (without time limit) using the following keywords: depression, terrorist, terrorism, mental health, disaster and trauma. Searches were undertaken between January 12 and 16, 2009. The initial database search identified 567 potentially eligible studies for this review. Second, two independent reviewers analyzed the title and abstracts of all retrieved studies and excluded those which did not meet the selection criteria. The majority of studies excluded in this step were papers that analyzed psychological consequences different from MDD, other kinds of disasters not categorized as terrorist attacks or other populations that were not either direct victims nor general population. Third, full manuscripts were obtained for all publications included after the second step. We examined the complete text of the articles and once again eliminated those which did not comply with the selection criteria. The majority of studies excluded in this step were papers that analyzed the psychological consequences of terrorist attacks without assessing MDD with diagnostic criteria. Fourth, to verify that our final sample was comprehensive and that our search was appropriate, we compared it with previous review papers.[1,3,6]

Search Results

Our search identified 11 studies of MDD following terrorist attacks: 6 were carried out with victims, 4 with general population samples, and one with victims and general population. Of these, 9 were cross-sectional studies and 2 were cohort studies. The most relevant information of each reviewed study is summarized in Table 1 (studies with victims) and Table 2 (general population studies). In these, information about the terrorist attacks, assessment time, sample size, method and main results (MDD prevalence) is shown.

Table 1. Studies of major depression prevalence in victims of terrorist attacks

Study	Assessment time	Sample	Method	Instrument	Measurement	Results
Abenhaim et al. (1992)	Between 4 months and 3 years after the attacks occurred in France between 1982 and 1987	254 victims	Self-report	15 items created ad hoc for this study and based on the DSM-III criteria Questions addressed complaints such as feeling depressed, irritability, sadness, sexual difficulties, loss of appetite, or asthenia.	Current depression (past month)	13.3% [10% men; 17.7% women] * 21.8% among the severely injured 8.5% among the mildly injured or uninjured
North et al. (1999)	6 months after the 1995 Oklahoma City bombing	182 victims	Personal and telephone interview	Diagnostic Interview Schedule (DIS)/Disaster Supplement based on the DSM-III-R criteria[27]	—	22.5% [13% men; 32% women] **
North (2005)	6 months after the 1995 Oklahoma City bombing Between 8 and	182 victims from the Oklahoma City bombing 227 victims	Personal and telephone interview in the Oklahoma	Diagnostic Interview Schedule (DIS) based on the DSM-IV criteria, with adjustments for	—	Oklahoma: 20.9% [11.4% men; 29.8% women] **

	10 months after the attack in Nairobi, Kenya, 1998	from the Nairobi attack	City study Personal interview in the Nairobi study	cultural fit [28]		Nairobi: 19.4% [15.8% men; 23.6% women] *
Iruarrizaga et al. (2004)	1 month after the M-11 terrorist attacks in Madrid	117 direct victims	Telephone interview	SCID's major depressive disorder (MDD) interview [30] Diagnostic interview based on the DSM-IV-TR criteria	Current depression	31.3% [19.1% men; 40% women] **
Gabriel et al. (2007)	5–12 weeks after the M-11 attacks	127 victims who requested medical assistance	Personal interview	Mini international neuropsychiatric interview (MINI), Spanish version [29] Diagnostic interview based on the DSM-IV	Current depression (last 15 days)	31.5%†
North (2001)	Follow-up 11 months after the study of North et al., 1999.	182 victims from the first assessment, 141 in the second	—	Diagnostic Interview Schedule (DIS)/Disaster Supplement based on the DSM-III-R criteria [27]	—	50% reduction in the prevalence of depression between 6 months and 1 year later†
Conejo-Galindo et al. (2008)	1, 6 and 12 months after the M-11 terrorist attacks in Madrid	56 victims who requested medical assistance 44 second assessment 42 third assessment	Personal interview carried out by psychiatrist	Mini international neuropsychiatric interview (MINI), Spanish version [29] Diagnostic interview based on the DSM-IV criteria	—	One month later: 28.6%† 6 months later: 22.7%† 12 months later: 28.6%†

Note: "Current depression" refers to people who suffer from major depression at the time of the interview
* Difference is not statistically significant
** Statistically significant difference
† Separate rates of depression in men and women not documented

Table 2. Studies of major depression prevalence in general population

Study	Assessment time	Sample	Method	Instrument	Measurement	Prevalence
Galea et al. (2002)	5–8 weeks after S-11	Representative sample of Manhattan south of 110th street N = 998 adults	Telephone interview	SCID's major depressive disorder (MDD) interview [30] Diagnostic interview based on the DSM-IV-TR criteria	Current depression (last 30 days)	9.7% [7.3% men; 12% women] **
Person	6 months after	Representative	Telephone	SCID's major	Depression	Since terrorist

et al. (2006)	S-11	sample of the metropolitan area of New York N = 2700	interview	depressive disorder (MDD) interview [30] Diagnostic interview based on the DSM-IV-TR criteria	since terrorist attacks Current depression (last 30 days)	attacks: 9.4% [7.9% men; 10.7% women] * Current: 3.9% [3.6% men; 4.2% women] *
Nandi et al. (2005)	4 months after S-11	Representative sample of New York N = 2001	Telephone interview	SCID's major depressive disorder (MDD) interview [30] Diagnostic interview based on the DSM-IV-TR criteria	Depression since terrorist attacks	9%†
Gabriel et al. (2007)	5–12 weeks after the M-11 attacks	Sample of residents of Alcalá de Henares (Madrid) N = 485	Personal interview	Mini international neuropsychiatric interview (MINI), Spanish version [29] Diagnostic interview based on the DSM-IV criteria	Current depression (last 15 days)	8.5%†
Miguel-Tobal et al. (2006)	1 month after the M-11 terrorist attacks in Madrid	Representative sample of Madrid N = 1589	Telephone interview	SCID's major depressive disorder (MDD) interview [30] Diagnostic interview based on the DSM-IV-TR criteria	Current depression (past month)	8% [5.1% men; 10.6% women] **

Note: "Current depression" refers to people who suffer from major depression at the time of the interview; "Depression since terrorist attacks" refers to those who have suffered major depression at any given time since terrorist attacks.
* Difference is not statistically significant
** Statistically significant difference
† Separate rates of depression in men and women not documented

In our review, most studies examine the impact of terrorist attacks in Madrid (March 11, 2004) and New York (September 11, 2001). Nevertheless, one study assesses the impact of different terrorist attacks occurred in France (between 1982 and 1987), another one assesses the consequences of the Oklahoma City Bombing (1995), and yet another one compares the consequences of the Oklahoma City Bombing with the attack on the US embassy in Nairobi, Kenya (1998).
The measures used to establish MDD prevalence were the Diagnostic Interview Schedule (DIS)/Disaster Supplement, based on the DSM-III-R criteria[24] (used in 2 studies); the Diagnostic Interview Schedule (DIS) based on the DSM-IV criteria, with adjustments for cultural fit[25] (used in 1 study); The Mini International Neuropsychiatric Interview (MINI), based on the DSM-IV criteria[26] (used in 2 studies); and the SCID's major depressive disorder (MDD) interview,[27] based on the DSM-IV-TR criteria (used in 5 studies). In one study[28] the researches assessed MDD with 15 items created ad hoc and based on the DSM-III criteria.

Results

Prevalence and Course of MDD After Terrorist Attacks

Results in Direct Victims One of the first studies with direct victims was carried out by Abenhaim, Dab, and Salmi.[28] These authors studied the consequences of 21 terrorist attacks that occurred in France between 1982 and 1987. Data were collected between 4 months and 3 years after the attacks. Results showed an overall prevalence of MDD of 13.3%, although this depended on the degree of the effect or harm suffered by the person: 21.8% among the severely injured and 8.5% among the mildly injured or uninjured.

After the Oklahoma City bombing in 1995, which caused the death of 167 people and left more than 600 wounded, several studies were carried out with persons selected from the record of victims of the Health Department of Oklahoma. In the first study, using a sample of 182 victims, North et al.[29] found that 22.5% of them suffered MDD between 4 and 8 months after the attacks. Moreover, 56% of these reported that they had not suffered this disorder previously. In another investigation, North et al.[30] examined the prevalence of different mental disorders, among them MDD, in victims of two different terrorist attacks, the Oklahoma City bombing and the attack on the US embassy in Nairobi, Kenya, in 1998. The goal was to compare the mental health of populations exposed to terrorism in different continents--North America and Africa--using a similar methodology in both studies. Results showed no significant differences in the prevalence of MDD in these populations in both men and women. There were no differences in the prevalence of other pathologies such as PTSD or panic disorder suggesting comparable consequences of terrorist events across very different contexts.

In Spain, several studies analyzed the psychopathological consequences of the terrorist attacks of March 11, 2004, in Madrid. In these attacks, ten bombs placed on four suburban trains caused the death of 191 people and wounded approximately 1800. Between one and three months after these events, Iruarrizaga, Miguel-Tobal, Cano-Vindel and González-Ordi[31] surveyed a sample of victims who were either in the trains or at the stations where the bombs exploded, or had lost relatives or close friends, or whose relatives or close friends had been wounded. This study documented a prevalence of MDD of 31.3%. Similar results were found in two other studies that assessed a sample of victims who requested medical assistance in various Madrid hospitals on the day of the terrorist attacks, despite differences in the assessment instruments and the methodology between them. The prevalence of MDD was 31.5% in the first study[32] and 28.6% in the second.[33]

Results are contradictory with regard to the course of MDD. In a follow-up study carried out by North[34] after the Oklahoma City bombing, only 50% of those who suffered MDD six months after the attack were still depressed one year later. On the other hand, after the March 11, 2004 attacks, whereas Conejo-Galindo et al.[33] found that the prevalence of MDD decreased slightly at 6 months (22.7%) they also found that the prevalence 12 months after the attacks was comparable to what it had been 1 month after the attacks (28.6%).

Results in the General Population Terrorist attacks can have an effect on the population that is directly assaulted or even on an entire nation.[20,21] Several studies have documented the consequences of terrorist attacks on the population as a whole.

Galea et al.[35] assessed a sample of residents of Manhattan between 5 and 8 weeks after the September 11, 2001 World Trade Center attacks. They found a prevalence of current MDD of 9.7%. These findings were replicated in another cross-sectional sample studied 4 months after the attacks.[36]

Person et al.[8] assessed the prevalence of MDD six months after September 11 terrorist attacks in a representative sample of the metropolitan area of New York. Data showed that the prevalence of MDD was 3.9%, suggesting a return to baseline in MDD in the general population 6 months after the attacks.

Miguel-Tobal et al.[37] carried out an epidemiological study to document the

psychological consequences of the March 11, 2004 terrorist attacks in Madrid. Using a methodology similar to the one employed by Galea et al.,[35] and adapting the instruments they used, they assessed a representative sample of the adult population of Madrid between 5 and 15 weeks after the attacks. The results showed a prevalence of MDD of 8%. After the same event, similar results were found[32] in a sample of residents from the population of Alcalá de Henares (Madrid). The prevalence of current MDD in this case was 8.5%.

Correlates of MDD After Terrorist Attacks

The correlates of MDD reported in the reviewed studies were classified as pretraumatic, peri-traumatic, posttraumatic, and sociodemographic factors.

Pretraumatic Factors Several of the studies discussed up to this point have shown that the probability of suffering MDD after a terrorist attack was increased by at least twofold among those who had experienced at least one stressful situation in the 12 months prior to the terrorist attack.[8,32,35,37]

Peri-traumatic Factors Variables that have an impact during or some time immediately after the attack are included in this category. Among them, the emotional reaction in the immediate aftermath of the attack has been shown to be a significant predictor of subsequent MDD. Across studies, the risk of developing MDD one month after the terrorist attacks, or of still suffering from MDD six months after the terrorist attacks, is approximately three times higher in those with symptoms of panic during or shortly after the attacks.[8,35,37] Similar results were shown in the people who admitted having been afraid to die or of being injured during the attack.[37]

Posttraumatic Factors The factors or events that occurred in the weeks or months after the terrorist attack were classified in this category. Among them, the occurrence of stressful events or the loss of psychosocial resources after the terrorist attacks is noteworthy. Having experienced more stressful situations after September 11, 2001, multiplied the probability of suffering from MDD by between 1.2 and 2.4 in a representative sample of residents of New York City.[8] In addition, the loss of psychosocial resources has been associated with MDD in other study.[35]

Sociodemographic Factors Of all the sociodemographic variables studied, the clearest relation was found between gender and the risk of MDD following the terrorist attacks, with women having consistently higher prevalence of MDD after these events. This result has been documented in direct victims of terrorist attacks[32,33] and in the general population.[32,35,37]

Other variables commonly analyzed, such as age, race, or ethnicity, do not show a consistent relation with MDD in these studies. For example, being Hispanic was a significant predictor of MDD one month[35] but not 6 months[8] after the September 11, 2001 attacks or, with respect to age, prevalence of MDD was lower in older people after September 11, 2001 attacks[35] but not after the March 11, 2004 terrorist attacks.[37] Nonetheless, variables such as the economical or educational level were not associated with a differential risk for the onset of MDD.

Several studies have assessed the proximity of residence to the place where the terrorist attacks occurred and the relation of this variable with subsequent MDD. In contrast with the findings in the assessment of PTSD,[3] the proximity of one's residence has not been consistently shown to be a predictor variable of MDD, at least in the works with general population.[37]

Results are inconsistent with respect to social support. Whereas in some studies the perception of social support in the months prior to the terrorist attack was shown to be a negative predictor of MDD,[35,37] in other works no significant association between these variables was found.[8,32]

Overview of the Excluded Studies

Excluded studies that assess the prevalence of other psychological problems after terrorist attacks have generally been focused on PTSD. The research literature suggests that the burden of PTSD in persons exposed to disasters is significant. Specifically, the prevalence of PTSD among direct victims ranges between 30% and 40%, while the range in the general population is

between 5% and 10% [see 3 for a review]. Furthermore, a common result is that the prevalence of PSTD in the aftermath of a natural disaster is often lower than the rates documented after human-made disasters (such as terrorist attacks).[1,3,6]

Other studies not included in our review examined the prevalence of MDD after natural disasters or chronic exposure to trauma. Some of the natural disasters evaluated have been the 1999 Turkey earthquakes,[38] the 2004 Asian Tsunami,[39] the 2004 hurricane in Florida[40] or the 2005 hurricane Katrina.[41] Natural disasters affect broad geographic areas, leading investigators to study populations that often include both direct and indirect victims.[3] Consequently, reports of MDD prevalence rates after natural disasters vary widely. For instance, a study on the Turkey earthquakes showed a higher prevalence of MDD closer to the epicentre (16%) compared to 100 km away (8%).[38] Another study on the Asian tsunami found a higher prevalence of MDD in displaced people (30%) than in two other samples of non-displaced people (21% and 10%, respectively).[39] Focused on chronic exposure to trauma, different studies have examined the significant impact of terrorism in the Israeli population since the beginning of the Al Aqsa intifada in September 2000. In a study conducted in April-May 2002, Bleich et al.[42] showed that over half of a national representative sample of Israel reported feeling depressed. In another population-based study carried out between January 2002 and December 2005,[43] 15.4% of participants reported a MDD, with rates of MDD being 2.4 times higher among Arab Israelis than among Jews. This difference between Arabs and Jews has been shown in other studies, and is consistent with both MDD as well as other psychological problems,[44,45] suggesting that the mental health impact of terrorism differs among diverse groups living in Israel. Along the same line, different authors have documented the psychological impact of impending forced settler disengagement in Gaza. Hall et al.[46] assessed a sample of Israeli settlers who, after having been exposed to ongoing terrorism, were forced to leave their homes. The prevalence of MDD was 16.8%, 5 times greater than that of settlers living in the occupied territories before the Gaza disengagement. Other papers have assessed the predictors of depressive symptoms in population-based cohort studies.[11,47]

Together with victims and general population, specific population sub-groups (e.g., emergency personnel or children and adolescents) have also been evaluated. In contrast to the findings in the assessment of PTSD, where the prevalence of PTSD among rescue workers is higher than in the general population,[4] prevalence of MDD in rescue workers seems to be lower than in victims or in general populations, as different studies carried out after March-11 terrorist attacks have clearly shown.[48] On the other hand, the impact of terrorism in children and adolescents reveals that a substantial proportion of youth reports a wide array of clinical needs and functional impairments months after an attack [see 49 for a review]. The role of protective factors for depression in adolescents has also received attention in the literature. For example, two prospective studies documenting changes in depressive symptoms (as measured by CES-D) in Israeli adolescents exposed to missile attacks[50] and suicide bombings[51] showed that social support (mainly friendly social support) buffers the effect of terrorism-related perceived stress in predicting changes in depression.

Discussion

The reviewed literature suggests that terrorist attacks are a risk factor for the development of MDD, mainly in the first months after its occurrence, and in certain at-risk populations. The risk of MDD ranges between 20 and 30% in direct victims of terrorist attacks and between 4 and 10% in the general population in the first few months after terrorist attacks. These prevalence rates are 2–3 times higher than might be expected according to general population surveys.[14,15] These results are consistent across studies that have used separate methodologies and assessment instruments after different terrorist attacks occurring in various cities [as in the case of the studies 35 and 37, or the study 30]. This suggests that the consequences of terrorist attacks may be universal and, in some respects at least, independent of context.

It is not easy to perform longitudinal investigations after the occurrence of terrorist attacks and the scarcity of studies in this area limits clear inference. Thus, whereas in some studies the prevalence of MDD in victims has decreased over time,[34] in other studies, it has remained relatively stable.[33]

There are several risk factors that have consistently been shown to be associated with the risk of suffering from MDD after a terrorist attack. These include having undergone stressful situations before or after the attack, having suffered a panic attack during the attack, being female, and having borne a greater loss of psychosocial resources. Although high perceived social support has been shown to be a protector factor for the onset of other psychological problems in several studies,[1] this result is inconsistent in relation to MDD. This inconsistency in the published studies may suggest the existence of moderating and/or mediating variables in the relation between social support and MDD after terrorist attacks.

Previous literature has noted that severe levels of impairment are most likely to occur in people exposed to terrorism than to any other types of disaster, such as natural disasters.[1,6] Consistent with these observations, the prevalence of MDD reported in our review appears to be higher than that reported after natural disasters.[38–41] Terrorism has been distinguished from natural disasters by its capacity to produce greater sense of fear, loss of confidence in institutions, unpredictability and pervasive experience of loss of safety.[4] These characteristics may be associated with the increased risk of psychiatric morbidity after terrorism. However, the different rates of MDD after natural disasters and terrorist attacks may be due to differences in the samples assessed among studies. After natural disasters, it is difficult to classify persons as either direct or indirect victims[3] and, consequently, the study sample may include persons who were more or less directly exposed to the disaster.[6]

Together with MDD, some of the reviewed studies assessed the prevalence of PTSD and some examined the comorbidity between MDD and PTSD. Given the evidence indicating the high rates of comorbidity between MDD and PTSD following trauma,[52,53] it is likely that MDD seldom happens in isolation after terrorist attacks. In this respect, one study examined in this review[37] reported high rates of comorbidity in general population, with around 50% of individuals with MDD having comorbid PTSD one month after S-11, and around 30% with MDD having comorbid PTSD one month after M-11. Similar results were reported in direct victims exposed to the Oklahoma City Bombing (55% of subjects with PTSD were also diagnosed as having MDD).[29] The mechanisms linking PTSD and MDD remain unclear, with alternative explanations including PTSD and MDD as a single general traumatic stress construct,[54] comorbid MDD developing as a secondary reaction[55] or MDD and PTSD as relatively independent posttraumatic disorders.[56] Reviewed studies show that MDD is not always concurrent with PTSD and suggest that, consistent with previous studies carried out after other traumatic events,[52,53] both disorders can be considered related but different posttraumatic reactions. In this regard, Rubacka et al.,[57] examining the specific association of PTSD cluster symptoms (re-experiencing, avoidance, and hyperarousal) and MDD in a sample of mothers directly exposed to the WTC attacks, showed that only higher arousal symptom scores were significantly correlated with persistent MDD. Furthermore, if we compare the rates of MDD and PTSD found in some reviewed reports, we can reach some interesting conclusions. Whereas in direct victims the probability of developing PTSD after terrorism is higher than that of MDD (with percentages of PTSD usually over 30%), this tendency is reversed in the general population. For example, the prevalence of PTSD and MDD in the general population was 7.5% and 9%, respectively, after S-11,[35,36] and 2.3% and 8%, respectively, after M-11.[37] These results support those found in previous research,[53,56] suggesting that the pathways to MDD and PTSD may by somewhat distinct; whereas the intensity of the attack and the degree of exposure may be more closely involved in the development of PTSD, bereavement and psychosocial loss may underlie MDD after a terrorist attack.[10,37]

The aim of the current work was to review the evidence regarding MDD following terrorism. There are some limitations to the literature in the field and

to our review that need to be taken into account when interpreting the results herewith presented.

Limitations of the Literature in the Field

First, although we only included studies that assessed MDD based on diagnostic criteria, most of them used instruments that did not include an assessment of either manic or psychotic symptoms, therefore we could not classify the disorder beyond probable MDD.[8] Although the prevalence of bipolar affective disorder is not much higher than 1%[14] it could be inflating the MDD percentages. Future investigations should take this into account in order to help improve our understanding of the psychopathological processes involved. Second, as we mentioned in the selection criteria section, the reviewed studies were not designed to ensure that persons were free from psychopathology before the occurrence of the terrorist attacks, which means that prevalence, instead of incidence, was assessed. Moreover, none of them included a control group that would enable the comparison between exposed and non-exposed populations. We overcame this challenge by comparing the prevalence of MDD following terrorism with the prevalence reported in other general population surveys. However, it is important to be cautious when interpreting this comparison because the majority of these epidemiologic studies are referred to a whole nation's population (e.g. Spain or United States)[15,58] and not to the city where terrorist attacks occurred (e.g. Madrid or New York), hence there could be differences between the two. Future studies should attempt to analyze the incidence of MDD by establishing baseline psychopathological assessments that may be used as population cohorts to document MDD incidence in the event of terrorism exposure. Third, there are several challenges facing longitudinal studies that aim to document the course of MDD. Several studies suffer from attrition, that is, the reduction in the number of people who participated in the follow-up studies. This may have biased the prevalence estimates of MDD, especially in the case of small samples.[33] Fourth, we have to be careful when extracting conclusions with respect to some correlates of MDD, mainly the pre-traumatic factors. In the reviewed studies, the assessments documented always took place after the terrorist attack in question. It is possible that pre-event reports are biased in the sense that depressed persons may selectively recall stressful situations that occurred before the attack to a greater extent than non-depressed persons.

Limitations of the Review

In relation to the characteristics of our review, we only considered studies that had assessed samples of direct or indirect adult victims. Even though we did not include studies that assessed children or adolescents, further work with this age group is clearly warranted. We also limited our search to studies that analyzed the consequences of terrorist attacks and not other kinds of disasters; knowing and comparing the prevalence and course of MDD after natural, technological, or other disasters linked to interpersonal violence (such chronic exposure to trauma) could help us understand the onset of mental disorders after mass traumatic events. Finally, we have focused our review on the examination of MDD using diagnostic criteria. This enables us to compare prevalence rates of MDD with previous epidemiological surveys and between studies carried out after different terrorist attacks. However, MDD is not the sole disorder within the unipolar spectrum and extant research after terrorism has also highlighted the high prevalence and impairment associated with other forms of depression, such as mild or minor depression. Including these other forms of depression, together with the risk factors associated with it, could be of research and public health interest.

Implications for Future Research in This Field

Our review highlights some key areas that are important for future research and may serve to guide intervention. First, the course of MDD after terrorist attacks remains unclear. That is why greater efforts are needed to elucidate the course of MDD after terrorist attacks. Second, there is very limited literature about psychological constructs that may be associated with MDD after terrorist attacks.[3,9] It would be interesting, in this context, to analyze the role played by other variables that have been shown to be related to MDD, such as attributional style,[59] self-esteem[60]

or response styles to depression,[61] and to examine the way in which certain psychological variables interact with other sociodemographic variables to predict the onset of MDD. For example, it is possible to analyze which psychological factors mediate the relationship between MDD and gender. This line of research will be useful in helping to identify the persons with higher probability of developing MDD following a terrorist attack and to improve the efficacy of the interventions from which they will benefit. Third, more research is needed on the role of MDD in psychiatric comorbidity after terrorist attacks. Although some reviewed studies have reported high rates of comorbidity between MDD and PTSD, more works are needed to have a better understanding of this relationship. For example, an interesting objective would be to examine the form in which both pathologies vary over the time after terrorism. In this line, some authors have recently documented the important role that depressive symptoms plays in the development and persistence of stress post-traumatic symptoms after different traumatic events.[62] Fourth, some of the studies in this revision included victims who had been bereaved.[33,37] Although not reported in these papers, differences in the prevalence of MDD may exist between victims who have been directly injured by a terrorist attack and those who have been bereaved. Moreover, bereaved people could develop other psychological problems, such as complicated grief syndrome. A number of studies support the differentiation between complicated grief and MDD,[63,64] and some authors have shown that it is a usual reaction in bereaved people after terrorism.[65] A clear definition of victims in future works could provide us with a better understanding of the psychological consequences in people directly and strongly exposed to terrorism.

Conclusions

The studies reviewed here, together with future research efforts in this field, should help to inform planned public mental health response that aims to mitigate the consequences of terrorist attacks by estimating the possible number of persons with MDD after such attacks, the potential course of the psychopathological burden, and the detection of populations at risk of developing these problems.

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List of abbreviations used:
MDD: Major Depressive Disorder; DSM: Diagnostic and Statistical Manual of Mental Disorders; M-11: March 11, 2004 terrorist attacks in Madrid; S-11: September 11, 2001 terrorist attacks in New York; PTSD: Posttraumatic Stress Disorder.

Health Effects From 9-11 Attacks: Special *Lancet* Issue

By Jim Kling
Source: http://www.medscape.com/viewarticle/749033?src=ptalk

The latest issue of *The Lancet* is devoted to the 10th anniversary of the September 11, 2001, attacks on the New York City World Trade Center (WTC), and features 3 studies of the health effects of those events on emergency responders. Two studies show increases in health problems among responders, including heightened risk for cancer and respiratory conditions, and a third shows a reduced death rate.

One of these studies focuses on 9853 male New York City firefighters who responded to the World Trade Center fire. The researchers had access to participants' health records going back well before the September 2001 attacks. They examined cancer incidence before the attacks, as well as during the following 7 years among both exposed firefighters and non-exposed firefighters.

Among WTC-exposed firefighters, there were 263 cases of cancer, compared with 135 cases in the non-exposed group. Models predicted that 161 cases should be expected in a non-exposed population. The exposed firefighters had a 10% increased risk of developing cancer when compared with a similar demographic mix of the male population of the United States. When compared with non-exposed New York firefighters, they had a 19% increased risk. Non-exposed firefighters had lower cancer rates than the general US male population, probably because they have lower smoking rates, are likely to be in better physical condition, and must meet stringent pre-employment health requirements.

According to the authors, the increased cancer rates among WTC-exposed firefighters could potentially be explained by contaminants in the WTC dust, including known carcinogens such as polycyclic aromatic hydrocarbons, polychlorinated biphenyls, and dioxins. Exposure could also have led to chronic inflammation, which is believed to play a role in oncogenesis. The results suggest that WTC-exposed firefighters should continue to be monitored for cancer incidence, the authors write.

Physical and Mental Illness

A second study considered physical and mental illness among rescue and recovery workers involved in the 9/11 attack. The study followed 27,449 of the approximately 50,000 rescue and recovery workers estimated to have been involved. The participants had voluntarily enrolled in the federally funded WTC Screening, Monitoring, and Treatment Program, which provides regular physical and mental health examinations to WTC rescue and recovery workers. Participants included police officers, firefighters, construction workers, and municipal workers.

The researchers divided participants into 4 categories based on their levels of exposure, each calculated by using days at WTC site, work in the pile of debris, and exposure to the dust cloud: low (14% of workers), intermediate (65%), high (18%), and very high (3%) exposure.

The participants were followed for 9 years after the attacks. There has been concern that inhalation of alkaline dust could cause respiratory problems, and the study suggests that concern could be warranted. Nine-year cumulative incidence rates were as follows: asthma, 28%; sinusitis, 42%; gastroesophageal reflux disease (GERD), 39%; and spirometric abnormalities, 42%.

Mental disorders also occurred at high cumulative rates, including depression (28%), post-traumatic stress disorder (PTSD, 32%), and panic disorder (21%). By comparison, police officers had cumulative incidence rates of 7% for depression and 9% for PTSD.

Disorders generally occurred at higher incidence in workers who had higher exposure. The trend held true for asthma, sinusitis, and GERD. Comorbidity was also common. About half (48%) of those who reported asthma also reported at least 1 mental health condition; 38% of those with sinusitis reported at least 1 mental health condition, as did 43% of those with GERD. The reverse was also true: 69% of rescue workers with PTSD reported at least 1 physical malady, as did 70% of those with depression and 72% with panic disorder.

This study supports previous findings that New York City police officers have lower risk of developing mental health disorders than some other responders. "Possible reasons for these findings include training, previous experience in dealing with similar stressors, self-selection of individuals with high resilience during recruitment into the workforce, and possible under-reporting of psychological symptoms because of perceived job-related repercussions," the authors write.

All-Cause Mortality Lower

Finally, a study of all-cause mortality rates among rescue workers and civilians involved in the 9/11 WTC attack found that death rates were lower than those in a comparison group drawn from the general New York City population.

For the period between 2003 and 2009, the team cross-referenced WTC Health Registry participants with New York City vital records and the National Death Index. Participants were categorized as rescue and recovery workers (including volunteers [RRWs]) or non-rescue and non-recovery participants (NRNRs), a group that included lower Manhattan residents, area workers, school staff and students, and commuters and passersby.

The researchers also calculated standardized mortality ratios (SMRs) for residents of New York City between 2000 and 2009. Within-group comparisons were made between participants who were subjected to high and medium exposure and those who were subjected to low exposure.

There were 156 deaths among 13,337 RRWs and 634 deaths among 28,593 NRNRs. After adjustment for age, sex, race, and calendar year, compared with the general New York City population, study participants had a 43% reduction in all-cause mortality (SMR, 0.57). There were a 55% reduction of all-cause mortality (SMR, 0.45) among RRWs and a 39% reduction in NRNRs (SMR, 0.61).

There was no link between higher exposure and increased mortality rates among RRWs. Among NRNRs, higher exposures were associated with higher all-cause mortality rates (22% higher risk for intermediate exposure compared with low exposure and 56% higher for high exposure). NRNRs with high exposure levels were more than twice as likely to die of heart disease than those with low exposure.

The fact that death rates are not higher than those in the general population is not that surprising, the authors say, because the illnesses studied tend to have long latency or long survival periods. The finding that death rates are actually lower could be explained by the worker cohort effect: Most participants were employed, and those who are employed are healthier than the general population. Second, voluntary participants in health studies tend to be healthier than the general population. Both effects are likely to wane over time, so risk for premature death related to WTC-exposure will probably show up in the ongoing analyses of WTC Health Registry enrollees, the authors note.

An accompanying editorial (no author listed) offered the following reflection: "This anniversary should also remind us that the incomprehensible, large scale loss of human life can obscure the small and terrifying tragedies that befall individuals and families. The tenth anniversary of 9/11 should be about the people who died, together with the families and communities that have been left behind — not only in America, but also in Iraq, Afghanistan, and all places that have suffered terrorist related incidents worldwide."

911 as seen from space (Discovery)

A decade ago, the 9/11 attacks killed close to three thousand people and with the chaos that ensued many more were left wondering what was going on, whether-or-not their loved ones were still alive – or what was coming next. One man in particular was more isolated than the rest of his fellow citizens on that horrific day – he was forced to watch, some 240 miles above the face of the planet – as his nation came under attack. Frank Culbertson Jr. (center) was the Expedition 3 Commander on the International Space Station when Islamic radicals slammed two planes into the World Trade Center in New York City and a third into the Pentagon in Washington D.C. A fourth hijacked plane, whose target was believed to be the Capitol Building in Washington D.C., was prevented from reaching its destination by passengers. The terrorists on board crashed that plane, United 93, near Shanksville, Pennsylvania. "I think like most Americans, at first I did not know what was happening – I just knew that it was bad," said Culbertson referring to the attacks. "It was very painful; it was like seeing a wound in the side of your country, your family and your friends."

NEVER AGAIN

Written on 18 Sep 2001
*By Nena Wiley**

Never before had I been paralyzed by terror and anguish; so consumed, so compelled. But I was on Tuesday.

Never before had I sat under my Nation's starry skies, with only the sight of fighter jets and the only sound; of freedom. But I did on Wednesday.

Never before has our family gathered together and made a "Plan A" to save our lives in case of disaster. But we did on Thursday.

Never before had I witnessed so many American Flags, heard so many anthems nor seen so many remembrance candles. But I did on Friday.

Never before had I seen so many many American heroes, nor heard of such brave acts across our land and skies. But I did on Saturday.

Never before had I felt our Nation to be united in grief, prayer, anger and resolve. But I did on Sunday.

Never before had I been glad to be interrupted by commercial breaks on television. But I was on Monday.

Never before had my soul wept beyond tears, nor had my heart bled red, white and blue. But they did that week.

Dear God, Please...never again.

* Pure Pursuit Intelligence Center