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PTSD 101 Course

Transcript for: What is PTSD?

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Hi. My name is Jessica Hamblen. I'm the Deputy Director for Education at the National Center for PTSD. Today, I'm going to provide an overview of PTSD, or Posttraumatic Stress Disorder.

I really have three main objectives that I want to accomplish in this talk. First, I want to describe the diagnostic criteria for PTSD and a little bit about how they have changed over time. Second, I want to describe the prevalence, consequences, and longitudinal course of PTSD. And then I want to provide you with information on risk factors for PTSD.

I want to take just a minute to tell you why PTSD is important to me. To me, what makes PTSD really interesting is that it has a known etiology – a traumatic event – like being in a war, being sexually assaulted, childhood physical abuse – and this event turns someone's life upside down and it's completely outside of their control.

Knowing that PTSD is caused by a traumatic event really creates a unique situation for clinicians in the VA. We know that we're sending our troops into situations where there's combat and where they're going to experience traumatic events. And so another thing that's important to me is that we take some responsibility for our veterans and that we help provide them with good treatments when they come home to help them cope with what they've experienced in the war zone.

I think it's important to point out that it's adaptive for people to have strong reactions to traumatic events. It's protective, right? It helps us prepare to respond under threat. So, long ago if you were chased by a saber-tooth tiger and you barely escaped with your life, the next time you think you see or hear a saber-tooth tiger you want your body to respond by helping you run away or defend yourself. But, what we want to see is that these reactions decrease over time when the threat is no longer present. Unfortunately, people with PTSD continue to experience these really extreme reactions, even when there's no threat present. And so the development of PTSD can also be seen as a failure to adapt.

Although PTSD is a relatively new psychiatric disorder, first occurring in 1980 in the DSM-III, the construct of PTSD has really been around for a very long time, but around by other names. Instead of being described by the psychiatric diagnosis, it was described by the event that caused it.

So we had disorders called shell shock or railway spine or war neurosis, concentration-camp syndrome and rape trauma syndrome, and all of these experiences resulted in symptoms that are very similar to the symptoms of PTSD that we have today.

The original definition of PTSD in 1980 reflected the belief that traumatic events were rare.

Criterion A, the stressor criterion, was defined as “the existence of a recognizable stressor that would evoke distress in nearly anyone.” And then you had to have symptoms from three clusters, reexperiencing, numbing, and then a third cluster that was sort of a catchall that included symptoms of arousal, avoidance, and numbing symptoms.

In DSM-III-R, the criterion A was re-defined as an event that was “outside the range of usual human experience” and that would be “markedly distressing to almost anyone.”

And the DSM added a list of qualifying examples to help clinicians know which events should be included. And these examples included things such as serious threat to life or physical integrity; serious threat or harm to one’s children, spouse, or other close relatives or friends; sudden destruction of home or property; seeing another person who has recently been, or is being, seriously injured or killed as a result of an accident or physical violence.

Now the accompanying text in the DSM talked about two other important changes in the stressor criterion. The first, that the stressor is “usually experienced with intense fear, terror, and helplessness” and you’ll see that this becomes important in the DSM-IV version. And second that indirect exposure, that is learning about a serious threat, or harm to a close friend, could now qualify as a traumatic event. And so by adding this indirect exposure, the stressor criterion was really significantly broadened and included events that wouldn’t have been included in the DSM-III.

A third change were changes to the symptoms. The core feature of the diagnosis, reexperiencing, was retained. But they added avoidance symptoms into that numbing cluster, and the third cluster, arousal symptoms, developed, and that symptom is now what we see today.

Fourth, and lastly, duration criteria were added. You couldn’t be diagnosed with PTSD until a month after the event. And I think this is really important because it separates what might be a normal reaction, most people have symptoms after a traumatic event, from a reaction that becomes more severe and more persistent. So you had to wait a month until you said that someone’s response to an event really qualified as a psychiatric diagnosis.

Now I want to spend a few minutes reviewing the actual symptoms themselves because to me, when you really look at the symptoms, it helps give you a flavor for what PTSD really will look like in a person with PTSD.

To be diagnosed with PTSD you have to have at least one reexperiencing symptom. Intrusive thoughts of the trauma are one type of reexperiencing symptom. As an example, a sexual assault survivor might be driving to work, doing the dishes, or just talking with a friend then she’ll suddenly start remembering the sexual assault. These thoughts typically feel like they are out of the blue, and they get in the way of what the person is doing, and they are upsetting to the person. You can also reexperience the trauma through nightmares or distressing dreams. Flashbacks are a third way to reexperience the symptom. In a flashback you act or feel as if the trauma is happening again. The last two reexperiencing symptoms are emotional and physical upset when you are reminded of the event. So as an example, an Iraqi vet may notice that their heart is racing (which would be physiological reactivity) or that they feel fearful (which would be emotional reactivity) when they hear a story on the news about the war.

To be diagnosed with PTSD you have to have at least 3 avoidance and numbing symptoms. I'll talk about avoidance first. Because the reexperiencing symptoms are so distressing, trauma survivors often work hard to avoid thinking about what happened to them. They will try to avoid thoughts, feelings, or conversations about the event. People with PTSD may turn on the radio, watch television, or just try to keep themselves so busy that they don't have to think about these things. The problem is that studies show the harder you try not to think about something, the more you actually do think about that thing. In the classic study, Wegner has people try not to think about white bears. Try it. What happens? The more you try not to think about a white bear the more thoughts you have about white bears.

Another way people avoid is by staying away from activities, places, and people that remind them of the event. A person who has been in a car accident may avoid the site of the accident or might avoid driving on highways if the accident occurred on the highway. A combat veteran may avoid crowds because in combat situations crowded places are unsafe. So, they may choose not to go to restaurants or movies where there are a lot of people and where it may be difficult to escape. A woman who is raped may avoid going to places where there are lots of men such as a bars or clubs, or even grocery stores.

The last symptoms are numbing symptoms. They were put with the avoidance symptoms because they serve a similar purpose, right? That is, they prevent the person with PTSD from having intrusive thoughts about what they experienced. But they're really more psychological strategies to avoid thinking about what happened to them than the behavioral ones we talked about with avoidance symptoms.

Inability to recall part of the trauma refers to a kind of a psychogenic amnesia. This symptom is really somewhat rare and we don't see it very often for people. It's not due to a head injury, for example, a car accident victim who hit their head on the steering wheel and can't remember, if they're saying they can't remember what happened that wouldn't count as psychogenic amnesia. What we're really talking about here are people who, for some reason have blocked out an important part of what happened to them when they were traumatized. We're not really sure where this symptom is going to end up in the DSM-V, so right now it's with avoidance and numbing symptoms and is somewhat thought of as a numbing symptom but the factor analyses that I talked to you about earlier show that this symptom doesn't really load very strongly on any of the factors. So let's move on and talk about some of the other symptoms.

People with PTSD find that they also have reduced interest in activities that they used to enjoy. Someone who used to exercise a lot may find they're just not interested in going to the gym anymore; someone who used to have a beautiful garden might feel like they have no interest in going out and tending to their garden or to their yard. This is not about lack of opportunity – it's really about a lack of interest, they just don't feel like it anymore.

Other symptoms include feeling detached from other people and experiencing a restricted range of affect. People with PTSD often feel like they are not emotionally close to anybody or attached to people, they say that people can't understand them and they feel emotionally numb. So in order to block out this fear response people turn off their emotions. And I sometimes think about it as a dial; and in order to turn down the fear or the guilt or whatever is going on that makes people feel uncomfortable, they turn down the dial and unfortunately they numb out all of their responses. Not just the negative ones but also the positive ones.

And so that's why we see that relationship problems are often associated with PTSD, because the person has turned down their loving feelings and their happy feelings as well.

The final symptom is a sense of a foreshortened future; and like psychogenic amnesia, we're not really sure where this symptom is going to go either. Again, it doesn't contribute as strongly to the avoidance and numbing as the other symptoms. But sense of a foreshortened future is really just a belief that people aren't going have a normal life span, and that their days are numbered. And they may not how that's going to

happen but they're just convinced that their life is going to be shorter than the life of somebody who doesn't have PTSD.

To be diagnosed with PTSD you have to have at least two arousal symptoms.

Some of these symptoms are similar to what we see in other anxiety disorders such as difficulty sleeping or irritability or trouble concentrating. I tend to explain this to my PTSD patients as a natural consequence to trying to manage their reexperiencing symptoms. Right? It's hard to sleep, stay calm, and keep your focus when you are constantly being bombarded with intrusive thoughts that are kind of getting in the way of what you want to do. Anybody would be kind of cranky and upset when they're dealing with something like that.

The other symptoms are hypervigilance and exaggerated startle response. People with PTSD tend to be hypervigilant, right? They are preoccupied with concerns about their own personal safety or even the safety of loved ones and are constantly scanning their environment for cues that might signal that danger is around or that they're in a threatening situation. And if you ask someone with PTSD about their safety cues or their safety routines, rather, they'll often say that they are not excessive. They'll say that they should be doing these things. But they really go well beyond what most of us do to keep safe. So it goes beyond just sort of locking your door at night; but they'll have a whole routine for checking and making sure that the house is secure. Unfortunately, hypervigilance does not really result in keeping people any safer. It doesn't even result in people being more aware of danger cues. What we see instead is that people with PTSD tend to overreact to safe cues as if they are cues that are signaling danger. So they're worried about situations being threatening where really there is no threat present.

And then the last symptom, as I said, is exaggerated startle response. And you will find that people with PTSD tend to be jumpy and startle easily, which makes sense since they are constantly believing that they are in a threatening situation.

OK, so now that I've talked about the diagnostic criteria for PTSD, I want to sort of change course and talk about the prevalence of the disorder.

The best information we have on prevalence of trauma and PTSD comes from a study called the National Comorbidity Survey, that was conducted in 1995. And it was a large representative sample of over 5,000 U.S. adults. It really remains the benchmark for prevalence for all mental health disorders that we see in the DSM. So when you see the rates for depression or the rates for anxiety or the rates for PTSD they really all come back to this one, big survey.

Over 60% of men and 50% of women reported experiencing at least one DSM-III-R traumatic event in their lifetime. And over 25% have experienced more than one traumatic event. So experiencing a trauma is something that happens to most of us, or at least half of us. The most prevalent events for men were witnessing someone being injured or killed (36%), being involved in a life-threatening accident (25%), and being threatened with a weapon (19%). The most prevalent events for women were actually a little bit different. They were being in a fire or natural disaster (15%), witnessing someone being injured or killed (14%), being in an accident (14%) and being molested (12%).

While more than half of US adults experience a trauma, only about 7% develop PTSD at some point in their lives. About twice as many women develop PTSD as compared to men. This is similar to gender differences for depression and other anxiety disorders.

When you look at current prevalence rates they are of course lower. Right, it makes sense that fewer people have PTSD at any one time than when you look at all the people who have ever had PTSD. And

here we see that about 3.6% of people currently have PTSD with higher rates again seen in women as compared to men.

Often when people ask about the likelihood of developing PTSD they don't really mean in the absence of a traumatic event. Right, they mean how likely is it that I'm going to get PTSD if something bad happens to me. Conditional risk is really that probability of having PTSD given exposure to a qualifying event. So, instead of looking at prevalence in the population at large, now we are looking at prevalence in people who have experienced certain kinds of traumatic events. So what is the likelihood of developing PTSD if you have been serving in a war zone, or if you were raped, or if you survived hurricane Katrina.

There are a couple of really interesting findings here; at least I think they're interesting. First, men experience more potentially traumatic events than women do. But women are more likely to get PTSD than men. About 20% of women and 8% of men develop PTSD after they have been exposed to a traumatic event.

Second, the type of trauma seems to play a crucial role, so some events are more likely to cause PTSD than others. You can see that being raped is more likely to cause PTSD in men than any other event. And for women, both rape and childhood physical abuse have the highest probability of causing PTSD.

One question you may be asking yourself is if PTSD rates are higher in women, is it because they are more likely to experience those types of events that are most likely to cause PTSD? And the answer really appears to be no. In a 2006 meta-analysis by Tolin and Foa, they found that gender differences were not explained either the likelihood of exposure or type of exposure. Other factors therefore must account for those differences and we don't really know what those factors might be. But it might be how the woman appraises the situation, that is how much threat she believes she's under, or other psychological or biological responses that she may be having, or other exposure characteristics such as severity of exposure. So it might be that those events, even though they have the same name are really different kinds of events if a woman is sexually assaulted, let's say, versus a male or if a woman experiences combat versus a male.

Now I want to turn my attention to talking about the particular trauma of combat exposure, which of course is a major concern for practitioners that work at the VA and DOD. But really it should also be a concern to practitioners outside of VA and DoD since the vast majority of veterans and military retirees actually seek their treatment outside of the VA system.

If we go back to the National Comorbidity Survey, which again was a sample of all Americans, one finds that the lifetime prevalence of PTSD among male combat veterans is very high. It was about 39%, which is significantly higher than the 3.6% lifetime prevalence for PTSD in the general population for men. By the way, I should say that I am talking about men only because in this sample there were not enough female combat veterans from which to generalize back to the larger population of female veterans.

So sticking with men for a minute, when we look at men who selected combat as their worst trauma to men in the National Comorbidity Survey who selected another event as their worst trauma, we see combat-related PTSD has a higher lifetime prevalence, greater likelihood of a delayed onset, and a greater likelihood of not being amenable to treatment. So combat PTSD seems to be a particularly toxic type of trauma.

The National Vietnam Veterans' Readjustment Study focuses specifically on Vietnam veterans; so I want to look at prevalence in this particular sample now. Conducted in the mid 1980s, the study involved a nationally representative sample of over 3,000 veterans including combat veterans, non-combat era veterans, and civilians.

In this study, men and women were equally likely to develop PTSD. 31% of men and 26% of women developed PTSD in their lifetime. But, interestingly, when they were assessed 20 years later, it was the men who were more likely to have current PTSD than the women. So 15% of men had current PTSD as compared to only 8% of the women. And we don't really know why this is the case but the example helps to illustrate an important principle which is, that whether you get PTSD or not really depends on a host of other factors. For example, the type of exposure, your age, your level of education, could all potentially explain the finding. We will talk more about this a little bit more when we talk about risk factors later on.

This slide is about PTSD from other conflicts. As you can see from the Gulf War, the prevalence is only about 10% of PTSD, in comparison to the rate of about 30% that we saw in Vietnam.

We also have some data on the wars in Afghanistan and Iraq, but really, this is a work in progress. First, the wars are on-going and so not all points in time have equivalent levels of war zone exposures so a service member who served in the early part of Iraq or Afghanistan might experience something really different from somebody who served in later periods of the war. And right now we don't really even know what that is. I'm just saying that when you look at one snapshot in time, as opposed to when the whole conflict is over, you're really only seeing that one snapshot in time. Second, many service members for Iraq and Afghanistan have been on multiple deployments and we're not sure how that's going to affect the prevalence of PTSD from these conflicts. So that's different from some of the longer, extended conflict time, the longer periods of time that people may have served in Vietnam but only one tour of duty versus these multiple tours of duty.

Nevertheless, I think it's important to talk about what we do know about the prevalence rate. In 2003, we have some data from four different US combat infantry units (three Army units and one Marine unit) that was collected 3-4 months after their return from Iraq and Afghanistan. And what we see here was that the prevalence rates ranged from 6-12% in Afghanistan to about 12-20% in Iraq. And again there were really too few women in the study to look at how the rates of PTSD prevalence might differ between men and women.

Again, we really don't know how this is going to look when the wars are over. And I just want to caution you that I don't think it makes sense to compare what we know about Vietnam and the Gulf War to what we know, or what we're seeing at the moment in Iraq and Afghanistan.

If you have PTSD there's also a good chance you've got some other problems going on as well. You have an increased risk of having a lot of other psychiatric disorders such as depression, other anxiety disorders, or substance abuse disorders. You are more likely to have greater functional impairment and a reduced quality of life, and poorer physical health. And I'm going to spend some time giving you examples of each of these next.

Again, I want to look at data from the National Comorbidity Survey. This data looks at the odds of having a comorbid psychiatric disorder in men and women, in people who have lifetime history of PTSD and people who don't have a lifetime history.

And the first thing you can see is that if you have PTSD you're basically at elevated odds for having all kinds of additional psychiatric disorders. In fact, 88% of men and 79% of women with PTSD had at least one other psychiatric disorder.

In every single case—for mood disorders, anxiety disorders, and substance abuse disorders, if you have PTSD you're at a greater likelihood of having a comorbid disorder than if you don't have PTSD. For example, you can see that men are six times more likely to have depression and women are four times more likely to have depression if they have PTSD than if they don't.

Next we'll look at impairment in functioning and quality of life.

You can see that people with PTSD have a lot more problems than people without PTSD. And these problems are really significant. Look at these numbers: People with PTSD are 40 times more likely to have academic failure, 30 times more likely to be a teenage parent, 60 times more likely to experience marital problems, and 150 times more likely to be currently unemployed.

The last slide was basically about PTSD in general; and now I want to talk more specifically about veterans. We have data from two different sources: the National Comorbidity Survey on the left and the National Vietnam Veterans' Readjustment Study on the right. And what you can see is that the findings are pretty consistent across the two studies.

Veterans with PTSD have greater problems holding a job, in terms of both unemployment and in terms of being fired; they have greater problems in terms of marriage, both divorce and separation or spousal abuse; they have poorer health; and increased limitations to physical functioning; and they're more likely to perpetrate violence.

Finally, people with PTSD have poorer physical health outcomes as well. So here's a study of women receiving Medicaid and the odds of having a physician-diagnosed health problem. What you can see is that people with PTSD or depression have significantly higher odds of having infectious diseases, cancers, endocrine problems like diabetes, circulatory problems, and respiratory problems as compared to women with no psychiatric diagnoses.

Now let's look at the course and onset of PTSD, and of course it's variable. PTSD usually occurs within the first few months after a trauma and the vast majority occur within the first two years. There is also some evidence that a higher percentage of people with combat trauma have delayed onset than is the case with other types of traumas. Thus there appears to be something that's unique, again, about combat trauma.

In the National Comorbidity Survey, an episode of PTSD was likely to be three years for people who got treatment and five years for people who didn't get treatment. But remember, that's just a single episode, and one of the things that we see with people with PTSD is that course is quite variable and persistent and relapse is common. So, you have to think about multiple episodes together or multiple three and five-year episodes together, you'll have a sequence of them.

Symptom exacerbation is very common in chronic PTSD. New traumas or life events can reactivate these symptoms. One thing that I think is interesting is that people are starting to look at Vietnam veterans who are coming to the age of retirement. And what we're seeing is that Vietnam vets who retire are now having exacerbation of their symptoms. And there is some reason to think that while they were working they were kind of able to control those symptoms but without work and without something to kind of fill their time, that these symptoms are worsening. And their physical health is getting worse at the same time they are aging so that combination of retirement and poor physical health may be one of the things, one of the reasons we are seeing either new onset PTSD or an exacerbation of PTSD in some of our older veterans. So people with PTSD are at greater risk for having a long duration of illness with a series of relapses and remissions.

Here are the data I was just talking about. What you see here is a survival curve analysis for people who sought treatment and those who did not. The top, dotted line, shows the people who did not seek treatment. The bottom straighter line shows the people who did seek treatment.

And I think there are a couple of interesting things to see here. First, in both samples, the curves decrease the most in the first 12 months after onset of the disorder. So, if you're going to get better,

you're likely going to get the most better in those first twelve months. But, there is some continued improvement over the next six years even though it's not a lot; people do continue to improve. But after that, we really don't see any change at all. So at that point their symptoms seem to stay the same. The other thing that you can see here is that it's about a third of people who really fail to recover from PTSD. So, again, PTSD is a chronic condition.

You can also see the point I was making earlier. The graph shows that about 50% of people who received treatment improved by about three years while it took about five years for that same 50% of the people to improve if they did not receive treatment.

I wanted to show this slide because I wanted to go back to the issue that we seem to see a greater amount for delayed onset for combat related PTSD than for other kinds of PTSD that are caused from other events. And I think it's reasonable to wonder what might be going on here. And there are some people who wonder if in fact it has to do with compensation and that the VA provides compensation for people who have combat-related PTSD and that there's something about that compensation that makes people come forward later on in life.

This study by Zehava Solomon suggests that there might be other reasons why people are having PTSD later on or at least that people would have PTSD later on, regardless of whether or not they're being compensated. So she followed a group of Israeli veterans from the 1982 war in Lebanon for a 20-year period. And she measured their PTSD at one, two, three, and 20 years post war. And so the first thing you can see is that there are just high rates of PTSD, 25-45% of people who served in that war had PTSD. But to me what's really important about this study is that some of the best evidence that PTSD can have a delayed onset when triggered by combat or when caused by combat. So what she found was that among people who did not have PTSD at 1, 2, or 3, years, 8.6% had PTSD at 20 years. So we don't know when that PTSD first started, whether it was at year four or at twenty but there are certainly cases of new onset combat-related PTSD that have a delayed onset.

Now I want to turn to the question of risk factors.

A risk factor is a characteristic that has been statistically demonstrated to be associated with (although not necessarily the direct cause of) a particular outcome, in this case PTSD.

And risk factors for PTSD are often examined at three different time points relative to the trauma: There are pretraumatic risk factors, typically things about the person that makes somebody more vulnerable to developing PTSD; peritraumatic factors, things that occur at the time of the event and then posttraumatic risk factors, which are things that occur after the event to increase risk.

It is important to understand that factors associated with the development of PTSD are not the same as those associated with the maintenance of PTSD. And there's some very interesting research in this area but we won't be able to go into that now but at this point I just want to make the point that these things are often overlooked and they can make a significant difference.

So turning first to pretraumatic risk factors, there are several variables that are consistently found to be related to PTSD including: female gender, some genetic factors, adverse childhood experiences, previous psychiatric problems, lower levels of education, lower socioeconomic status, and minority race.

There are a lot of studies that have looked at risk factors. I'm going to focus on Brewin et al's 2000 meta-analysis as just one example of what I have just been talking about. So let me take a minute and just talk a little bit about how one conducts a meta analysis on risk factors. What you do is you calculate an effect using standard deviations, odds ratios, or correlations and then test to see if that effect differs from 0. So you can see on this slide that Brewin used correlations. Then the next thing you have to do is you have to

look to see if the effects are heterogeneous. If you have significant heterogeneity then it means you have a range of effects and so your job is now to explain what might be causing the variability.

So, for example, Brewin found small effects for female gender, younger age, low SES (socioeconomic status), low education, and minority race; basically all the variables that we thought would be predictors. But, he also found them to have significant heterogeneity. So he stratified the sample (that is he broke the sample up) into a military group and a civilian group and he found that female gender was only a significant risk factor in the civilian samples while younger age, lower education and minority race were risk factors for only the military sample.

Here are a few more pretrauma risk factors. When looking at prior history, as opposed to the demographic variables we were looking at before, or the socio-demographic variables I should say, we see that psychiatric history, adverse childhood experiences, family psychiatric history, and childhood abuse were all significant risk factors. Again, these effects were fairly small.

Peritraumatic risk factors show a larger contribution to the development of PTSD. One of the most consistent findings is that the greater the severity of exposure, the greater the likelihood you're going to develop PTSD. So magnitude of the stressor itself is a major predictor. In Brewin's meta-analysis you can see that trauma severity was a larger predictor than the pretraumatic risk factors which ranged from .10-.19

Although Brewin did not look at these other peritraumatic factors: greater perceived life threat, feelings of helplessness, and unpredictability or uncontrollability of the trauma are also significant peritraumatic risk factors.

But the final risk factors—the posttraumatic set of risk factors—are the ones that are the most interesting and important. Among those is social support following the event and subsequent life stress. To me these factors are really the most interesting because they are really the only ones we can do something about. Right? We can't change someone's age, race, gender, or prior psychiatric history, but we might in fact be able to change what kind of community they come back into and what happens to people when they come back—in this case I guess I'm talking about coming back from war, but even the community response to other kinds of events that people experience.

And as you can imagine, think about the Vietnam veteran, right, where there was no social support, people came back from Vietnam and they were stigmatized—even picketed against, railed against. You really couldn't have created a worse situation for the development of PTSD. In contrast, it's very different from the current situation that we have in Iraq and Afghanistan wars where it seems like regardless of what people's political opinions are about the war, everybody at least seems to be in support of the veterans who served in the war. This is a good thing. In fact, there are studies showing that social support can in fact offset even genetic vulnerabilities. So social support might be able to help some of the things that I just said you couldn't change, you know, about a person before they go into war.

Another factor that's proving really important is subsequent life stress. Basically the more life stress, the more likely someone is to develop PTSD. So, if service members come home and they can't find work, that financial hardship or that stress can cause or can contribute to PTSD. If hurricane survivors can't get insurance to rebuild their home, that can contribute to PTSD. The more we can all do to increase social support and decrease subsequent life stress the better off trauma survivors will be.

I want to take just a minute more to talk about resilience. Because for years the focus had been on PTSD and who gets PTSD. But over the past decade there has been a new emphasis on who does not develop PTSD and why that might be. In simple terms, you could just flip the risk factors and call them protective

factors. So, if female gender is a risk factor then male gender is a protective factor. Or if younger age is a risk factor, middle age could be a protective factor.

But, resilience is really more than just an absence of risk. Fran Norris, at the Center, and some others are beginning to think about resilience as just a possible trajectory ending in wellness.

Let's look at some of those trajectories following exposure to trauma or severe stress. Norris proposes that there is a set of trajectories following a trauma.

In this model, resilience is really thought of as a "bouncing back" from harm as compared to early conceptualizations in which resilient individuals showed no signs of or symptoms of stress at all. Being immune is a really a separate trajectory that she now calls resistance. So we have resilience where you bounce back and resistance where you show no signs of stress at all. Recovery is a third process that shows a period of dysfunction lasting several months or more, and then a more gradual return to wellness. So as compared to resilience where you just have this sort of rebound and then you go back to normal, recovery is a period of time where you are really struggling with what's going on before you come back to baseline. Then there are trajectories that don't end in wellness. There is a relapsing/remitting trajectory, in which symptoms display a cyclical or up and down course; or you could have a delayed dysfunction trajectory, in which PTSD or some other trauma-related disorder emerges after considerable time has passed; and a chronic dysfunction trajectory, where there is an initial stress reaction and that reaction persists.

I want to show you some data Norris et al reports on because I think it helps summarize many of the points I have been talking about in this lecture. These are longitudinal data collected after 9/11 and we can see the variety of trajectories I just talked about.

Each of the lines represents a unique trajectory. I have highlighted the resilience trajectory because we were just talking about resilience, but you can see that there are many other paths. This is why it is difficult to say exactly what the course of PTSD is. It is quite variable depending on the individual. And, you can also see that while some people have no symptoms 3 years later, others have significant symptoms.

What you can't really see is the variability that I suspect is occurring within some of these different time points or within these trajectories. You would need to measure people more often over time than this study did to show the ups and downs that a lot of people may experience even if they are going on a steady course down or a steady course up. That path isn't going to be consistent, everybody's going to experience ups and downs.

Finally, I want to tell you that there are effective treatments for PTSD. We have excellent psychosocial treatments, and we have pharmacological treatments as well. All of the practice guidelines support the use of cognitive behavioral therapies such as prolonged exposure and cognitive processing therapy. EMDR, eye movement desensitization and reprocessing, has also been shown to be an effective treatment in some of these guidelines, although my own opinion is the data are not as strong as for EMDR as for CBT.

Pharmacological treatments have been shown to be effective, but frankly not as effective as psychosocial treatments. The gold standards right now are the SSRIs, selective serotonin reuptake inhibitors, but there is increasing evidence that other antidepressants and even some anticonvulsants for some people, may be effective as well.

If you are interested in learning more about either CBT or pharmacological treatments please view our other PTSD 101 courses on these topics.

I've really enjoyed giving this presentation on this important topic. There are two main points I hope you take away.

First, that trauma and PTSD are highly prevalent. So, clinicians and physicians should take the time ask people about whether or not they've experienced a trauma and if so, if they are having symptoms as a result. It's important because we know the consequences of PTSD are considerable, in terms of their comorbidity, in terms of problems in functioning, quality of life, and also physical health.

A second take away message is that while the course of PTSD is often chronic and persistent, we now have better treatments for PTSD today than we ever did in the past. If we can intervene early in peoples' lives, we might be able to prevent the chronicity from setting in.