WEBINAR VIDEO TRANSCRIPT

Opioid Addiction Treatment ECHO

Trauma-Informed care and the role of Adverse Childhood Events in predisposing to SUDs

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BRANT: Today we're gonna be talking about the impact of adverse childhood events on addictions in particular. There have been links for adverse childhood events to any number of health outcomes, but we'll focus particularly on the evidence for its links with addictions today. This was developed by Eric Arzubi, our colleague at the Billings Clinic, excuse me, in Billings, Montana. I don't have any conflicts of interest to disclose.

What we're going to do is we're going to outline the basics of the adverse childhood events study. We're going to talk about how adverse childhood experiences or adverse childhood events are related to later substance use, and then talk about the link between ACEs and substance use and how that might inform our treatment of people with a substance use disorder. Now, the ACE Study of the adverse childhood experience or adverse childhood events study came out of Kaiser Permanente. I don't quite understand this, this story arc that Eric had outlined. But let's just skip over what the origin of the ACEs study was and talk about the study itself.

So, the study was intended to examine the relationship between exposure to 10 different adverse childhood events and physical and mental health status as an adult. You know, a lot of us have observed in our own clinical practices that our patients who come to us the most frequently, that have the most frequent problems, who have the most recalcitrant presentations have experienced a great deal of trauma in their lives. And so, this study has set out to examine what the degree of that relationship was. And the study found, more or less, a direct dose dependent relationship between the number of adverse childhood events and negative physical or mental health outcomes. This is a graph showing the sort of dose response relationship between the number of adverse childhood events increasing as you from left to right, and then the risk for negative health and well being outcomes.

And so, as you get to more than five adverse childhood events you have a much higher risk of negative health and well being outcomes, and here are some of the outcomes that have been studied so far, obesity, diabetes, depression, suicide attempts, sexually transmitted infections, heart disease, cancer, stroke, COPD, fractures. What's also been studied is also a link between adverse childhood events and pain and also adverse childhood events and frequent access to healthcare. So, people who are heavy utilizers of healthcare services tend to have more adverse childhood events. Adverse childhood events have also been linked to behaviors such as smoking, alcohol use, and substance use, illicit substance use. And then lastly, adverse childhood events have been linked to diminished life potential, meaning less graduation percentages, decreased academic achievement, and lost time from work.

So, the ACE Study, the original ACE Study took a look at 10 variables in terms of the adverse childhood events Adverse childhood events were divided up into two forms of, or three forms of abuse, sexual, emotional, and physical, two forms of neglect, which is emotional and physical neglect, and then five forms of family stresses or profound family stresses, stated here as family challenges. So, the child observing the mother being abused, parental separation or divorce, the presence of a mental illness in the household, presence of substance use in the household, and a family member who has been incarcerated. Now, this information was gathered retrospectively from patients at Kaiser Permanente and so there's some limitations to the study in terms of it's a retrospective cohort where people are remembering back to their childhoods and remembering how many of these adverse childhood events that they've had. Nonetheless, this study involves quite a few people, about 10,000 people in each survey wave and the wave two involved a more thorough analysis of the link between ACEs and addiction in particular. And you can see these were cross sectional cohort studies that are looking long, looking retrospectively at ACEs and measuring those against the current health of the person reporting the survey.

Here's the breakdown in terms of percentage of people in these, in this sample who had experienced these various forms of ACEs. So, here's the abuse. So, 11% of the sample experienced emotional abuse. About a third of the sample experienced physical abuse, and about a fifth of the sample experienced sexual abuse and this is, remember, this is in childhood. And here are the exposures to these household challenges. Remember, this is substance abuse in a parent or substance abuse in the household, mental illness in the household. And then 15% experienced emotional neglect and 10% experienced physical neglect. So, all in all most people in the sample had experienced one or more adverse childhood event. Here's the breakdown of adverse childhood events. Only about a third of the sample had not experienced any adverse childhood events, and then you can see this diminishing percentage of people experiencing one, two, or three adverse childhood events and then one in eight of the sample had experienced four or more adverse childhood events.

Now, adverse childhood events lead to negative health outcomes through a variety of hypothesized mechanisms. One of the first things is that the child who's exposed to adverse childhood events has profound disruptions in their development. So, they will experience profound disruptions in their ability to recognize emotions, to communicate emotions, to relate to important figures in their lives, to experience safe relationships, and to self soothe, 'cause we learn how to self soothe through our relationships with our primaryfigures. And so, this impacts the ability for the child to develop socially, emotionally, and cognitively and then these children as they age they reach for things that can help them to regulate their emotions and their emotional pain and they reach for things that are readily available, work fairly quickly, and are not necessarily contingent upon a healthy relationship.

So these are things like substances of abuse, alcohol, tobacco, marijuana, cocaine, et cetera, and also relationships that are unhealthy, relationships that are intense, that are unstable, having impulsive kinds of sexual encounters, multiple sexual partners, and so on. And as we know these health behaviors can go on to result in disease, disability, social problems, and then over time with disease and disability and social problems people experience early death. So, this is the sort of the arc of how this may occur. One of the other things that's interesting about adverse childhood experiences is that high stress in early development can result in changes to the way that our genes are expressed, that shifts our genes, shift

our gene expression to the direction of, that is more risky for adverse mental health and physical outcomes. And that patterning, or they call it an epigenetic patterning, can persist even after people have sort of settled down a little bit later in life. So, there's some genetic changes that can occur as well.

So, looking specifically at adverse childhood events and substance use disorder in particular, so, this is the cohort description. So, about equal amounts men and women. They were fairly older in terms, in reference to their recall of their childhood events. So, this is, mean age of in the mid 50s, and this sample from Kaiser Permanente was mostly white and fairly well educated with a very small portion of people who had not graduated from high school and this is one of the main drawbacks of the ACEs Study or one of the main criticisms is that this is a mostly highly privileged sample.

There is a similar type of a study that was done in Chicago from the 1980s and it's still going on now called the Chicago Longitudinal Study that actually looks at adverse childhood events in a sample that is 93% African American and 7% Hispanic, and so, and those results are actually very similar to these results. So, this appears to hold true in other socioeconomic groups. So, here are some concepts that were used in this study. They had asked people about lifetime drug use, drug problems, whether or not they became addicted and whether or not they had parenteral use, and these are the questions that they used to assess these things. Have you ever used street drugs? Have you ever had a problem with street drugs? Have you ever considered yourself addicted to street drugs? Have you ever injected street drugs? Now, obviously these questions were designed to be given in a survey in single questions that would sort of tap into something and they're not as rigorous as we might want to understand definitely whether or not somebody has a substance use disorder or substance dependence, and they didn't really break it down all that well in terms of individual substances of abuse.

So, the mean age of initiation of substance use disorders was about 20 years and this is the breakdown. This is how they categorized this. So, early adolescence is defined as 14 years, middle adolescence 15 to 18 years, and adulthood 19 years and older. Now, of course we all know that adolescence developmentally can extend well into the 20s and sometimes into the 30s depending upon the person you're talking to. And in this study it appeared that these adverse childhood events clustered together. If somebody was exposed to one adverse childhood event then the probability of them having exposure to a second adverse childhood event was 86%, and then, the probability of exposure with two more was 70%. So, these, we see this also repeated in our patients when we're treating patients who have had a history of trauma. It's almost, it's almost like trauma is magnetically attracted to them. They experience more and more traumas, and I think it's because of the perpetuation of trauma related behaviors and trauma related risk behaviors.

So, each of the 10 adverse childhood events increases, increased in a dose response relationship the likelihood of early drug initiation, and the likelihood of lifetime use. So, as you have increased amounts of adverse childhood events you grow in terms of two times to four times increased likelihood of drug initiation 14 years or younger and then also drug initiation at later periods of time and also the likelihood of lifetime drug use. This is very, this is the same thing that I said before. So, the higher your ACE scoregoes the more the impact is on your risk of having illicit drug use during these periods of time, in a dose dependent manner. The initiation during early adolescence had the strongest relationship with

the ACE score. And then for every increase in the number of ACEs the likelihood of initiation of illicit drug use increased by, and here's the amounts that they increased by depending upon the time period.

So, each time that you had one more adverse childhood events your likelihood of initiating drug use before the age of 14 increased by 40%, and you can see the sort of the influence of ACEs diminished when you're considering initiation of drug use at later ages. So, ACE score also increased the likelihood in a dose response manner of ever having drug problems, ever being addicted to drugs, or ever injecting drugs, and that with each increase in the ACE score there was a 30 to 40% increase in each of these problematic drug related behaviors. So, here's the, if you look at it a different way, so what percent, proportion of a population, if you take that slice of people who have experienced at least one adverse childhood event, what percentage of those will develop each of the following problems due to that exposure? This is the attributable risk fraction. So, about 56% of them will ever have had a drug problem. 63% of them will ever have been addicted to illicit drugs. This kind of doesn't make a little, much sense 'cause if you have addiction to illicit drugs you probably should have a drug problem as well, and then 64% ever using parenteral drugs. Suffice it to say that if you have one or more ACE your chances of having a drug problem are quite high.

So, the ACEs study along with other investigations into the impact of trauma on substance use had led to what we call trauma informed treatment, or trauma informed care. And trauma informed treatment looks at addiction as a trauma related disorder, and looks at unrecognized adverse childhood events as a major determinant of who develops addiction and who does not develop addiction, and recognizes that people may be seeking emotional comfort or treatment of intense emotional states using substances of abuse. This is the sort of old self medicating hypothesis and I think, I wouldn't necessarily say self medicating because medicating implies that there's a therapeutic benefit. I would say that they're utilizing substances to soothe emotions and they're getting caught in the adverse effects of that self soothing behavior.

So, and since adverse childhood events travel in clusters, if somebody has witnessed parental abuse they're more likely to have witnessed parental substance abuse, this is revealing a complex failure of family systems and also community systems that support families, and then it also recognizes that systems of oppression like war, racism, intergenerational trauma predispose people to the adverse effects of adverse childhood events. So, if we have a deeper understanding of the impact of adverse childhood events we can improve our ability to use some key aspects of motivational interviewing. So, this is one example of trauma informed treatment. So it may be easier for us to express empathy in motivational interview, and to express person centered care in motivational interview.

You know, working with people who have substance use disorders and substance use disorder related behaviors can be quite frustrating sometimes, and it can be difficult to maintain that empathy and maintain that person centered care, and if we can recall that this person probably has experienced a lot of trauma it may help to support our empathy in person centered care. Another example of trauma informed treatment is what's called Seeking Safety. Oh, that gets, we get to the next, that gets, that comes next. This is just the outline of sort of trauma informed programs or trauma informed systems of care. So trauma informed systems of care realize the widespread impact of trauma and understand potential paths for recovery.

So, trauma informed treatment. They recognize signs and symptoms of trauma in patients such as signs of PTSD or emotional dysregulation, personality disorders, burn out, substance use disorders, and then recognize that as a manifestation of trauma. These systems respond by fully integrating knowledge about trauma into policies, procedures, and practices to try to resist re traumatization. So, an example of re traumatization in substance use disorder treatment would be if you're seeing a provider who scolds you and kicks you out of the practice because you have a substance use disorder. So that's an example of a re traumatization that we can prevent by taking a more motivational interviewing and harm reduction approach to the patient. So, SAMHSA recommends that trauma specific interventions recognize the survivor's need primarily to be respected, informed, connected, and hopeful regarding their own recovery. And again, this isn't, this isn't, these are key to MI as well, to motivational interviewing as well.

It's amazing when you're working, one of the most amazing things that can happen when you're working with people who have a substance use disorder is when you demonstrate that respect, that willingness to educate your patient, and that attitude of hopefulness. The patients who have these substance use disorders can experience a remarkable sort of transformation even before your eyes. They can, they can, you'll see the change in their face oftentimes as you treat them in these respectful ways, and they, they sort of settle into the treatment. It's actually quite remarkable to see.

SAMHSA recommends that trauma specific interventions recognize the interrelation between trauma and symptoms of trauma including all these manifestations, and then the need to work in a collaborative way with survivors of trauma, family and friends of survivors of trauma, so educating your patient's family and friends and loved ones about the impacts of trauma, and other human agencies, human services agencies, to empower survivors and patients. So, this would be correlating, coordinating closely with human service agencies that focus on housing and focus on income support, focus on food support to make sure that you're supporting the patient's basic needs in a trauma informed way, with dignity is, I think that's the real key.

So, Seeking Safety is another example of a trauma informed treatment. This is an evidence based treatment that was developed in the 1990s with funding from NIDA. It addresses both trauma and addictions in a group or individual therapy setting and has been implemented across many different populations including people who are homeless, people on the criminal justice system, people who have experienced domestic violence, people with severe mental illness, veterans. With regard to a treatment of PTSD, Seeking Safety is superior to no treatment and appears to be non inferior or possibly indistinguishable from other forms of trauma informed treatment, like EMDR and trauma focused psychotherapy approaches.

So, trauma informed treatment, Seeking Safety key principles here are helping patients to attain safety in relationships, thinking, behaviors, and emotions. So, the focus here is on safety and the focus here is on helping them to understand what a safe relationship is, helping them to understand what kinds of thinking and behaviors are likely to lead to more safety and likely to lead to less safety, and this is trying to rehabilitate the lost learning that they did not get in childhood about what is a safe relationship, what is not a safe relationship, what's a safe behavior, what's not a safe behavior, what emotions are destructive, what emotions are healthy.

Seeking Safety integrates treatment to work on both trauma and substance use at the same time, so they will talk about substance use as an unsafe behavior that can lead to further traumatization. Focusing on ideals, so what are the patient's core values, core ideals, and how can they live those things out in their relationships, thinking, behaviors, and so on, and this is in an effort to counteract the loss of ideals in both trauma and substance abuse. So people who have substance abuse disorders oftentimes lose touch with their ideals because they're just needing to feel physiologically better regularly to, as they're going into withdrawal, they're just trying to combat withdrawal, and then also people with adverse childhood events lose contact with ideals. They don't really form very well a sense of identity and a sense of sort of moral agency.

So the four content areas of Seeking Safety are cognitive areas, so shaping the way people think, behavioral areas, shaping the way people feel, I'm sorry, people behave, rather, interpersonal area, shaping the way that people interact with other people, and then case management focusing on people's access to basic services. And then lastly, attention to clinical, clinician processes in Seeking Safety encourages clinicians and other people developing, or delivering Seeking Safety to monitor their own emotional response, to care for themselves to prevent burn out.

So this, going back to the learning objectives, this, we were reviewing the ACE Study, what the ACE Study was, how adverse childhood experiences are related to later substance use. Remember, it's a dose dependent fashion with all different aspects of substance use, and then how does understanding the link between ACEs and substance use disorders inform treatment. This is the SAMHSA encouraged trauma informed care. So, there are references included here. Here's the reference for the original ACEs study that links it to illicit substance use and I'm also happy to send out the reference for and the article of the Chicago Longitudinal Study that is reflecting a more diverse cohort.