

## **Episode 135 - Chris Veeh: Traumatic Brain Injury and Incarcerated Youths: A Role for Social Work**

[00:00:08] Welcome to in social work. The podcast series of the University of Buffalo School of Social Work at [www.socialwork.buffalo.edu](http://www.socialwork.buffalo.edu). We're glad you could join us today. The purpose of social work is to engage practitioners and researchers and lifelong learning and to promote research to practice and practice to research. We're so sure did you know that in social work now has an online mailing list to receive updates on newly released podcast. Go to our website. [www.insocialwork.org](http://www.insocialwork.org) and click on the envelope icon near the center right of the page and just above our most recent episode. You will be taken to a new page where you can sign up to stay in touch with in social work. Hello I'm Charles Syms Traumatic Brain Injury or TBI. There are all kinds of ways that an individual can receive this type of injury. Today the topic normally centers on the injuries suffered by military service personnel or individuals involved in contact sports. The result of a TBI can be substantial requiring intensive long term intervention or it might be so subtle so as not to be considered serious by the injured person though subtle the injury or injuries are known to have an impact on how that person may function in the world around them. Therefore increasing effort has been directed to better understand traumatic brain injury while working on a research project. Today's guest was reviewing files of adults who had been incarcerated in the Kansas state prison system when he noticed an emerging theme.

[00:02:05] A large number of the individuals reported circumstances that would lead one to suspect a traumatic brain injury. Chris Veeh is a doctoral student at the University of Denver Graduate School of Social Work. Prior to his enrollment in the doctoral program Mr. Veeh worked at the University of Kansas School of Social Welfare as a data manager on a project that evaluated a statewide Prison Reentry Initiative for incarcerated adults his current research interests include community reintegration and that assistance process of both juvenile and adult incarcerated populations as well as transdisciplinary approaches to social work research. In this podcast Mr. Veeh discusses the pattern he observed in the reentry data of early life head trauma in those incarcerated adults. He also discusses his systematic review of over 20 studies looking at head injury and incarcerated people. Mr. Veeh makes the argument that early head trauma can play a role in behavior that can lead to incarceration and that there is likely a significant number of incarcerated youth with TBI exposure. He also describes how the injury can interfere with their prosocial functioning and lead to increased odds for problematic behavior. Mr. Veeh identifies valid tools to assess for TBI history as well as evidence based interventions that the social work practitioner can employ in their work. Finally Mr. Veeh argues for universal screening of youth involved in the criminal justice system. I interviewed Chris Veeh for this podcast in October 2013. Welcome Chris to the podcast. I do have a question that I think our listeners would really like to hear is how did you come to this work. How did you get started working with this particular population and talking about possible traumatic brain injury prior to entering the Ph.D. program at the Graduate School of Social Work.

[00:04:19] I was at the University of Kansas School social welfare for four years and I worked as a data manager on a project that evaluated state statewide prisoner re-entry program for incarcerated adults. And during the course of my duties one of the things I was asked to do was to review case files for participants in the re-entry program that covered their time while they were incarcerated. And then while they were on parole as I read these case files over time they included background summaries that describe like major events leading up to the individual's incarceration and the more these summaries I read the more I began to notice that they mentioned a fight or a fall or a motor vehicle accident or some other type of event where they said they blacked out or they run conscious for some period of time and it seemed like it usually occurred you know when they were like seven

to 13 or you know like even a little later maybe 16 or 17 and just I began to think about this anecdotal pattern that I began to see and it made me think about whether there were the existence of these tirades of concussions actually lead in the severe head trauma that resulted. Whether they were associated with these individuals later involvement in the criminal justice system and since it seemed to occur earlier in life it seemed appropriate to look at youth that were involved in the criminal justice system and to see whether there could possibly be interventions to help address issues from traumatic brain injury in population.

[00:05:58] And actually when I started the Ph.D. program right when I started to look deeper into this there's actually a really great article by two social work researchers Brian paren and Matthew Howard and they actually did a Hice almost a complete census of individuals in the state of Missouri youth that were incarcerated in Missouri and they actually found fairly significantly high rate of moderate to severe TBI among youth involved the criminal justice system so that kind of sparked my interest even more. That's very interesting particularly that there has been some background work to kind of point us in that direction. Many people when they think about traumatic brain injury think about car accidents or in the case of war people being exposed to explosive devices and that kind of stuff. How do you define traumatic brain injury and particularly traumatic brain injury in just particular case when you're talking about the kids that you've worked with. It's actually a really hard and fairly amorphous subject of how exactly to define brain injury especially history of traumatic brain injury. But based on my review of the literature and kind of looking at how different studies as this has defined it I've come up with a three part definition which basically says first TBI is an injury to the head that results from a forcer trauma that originates externally from the individual and this trauma upon the brain most commonly results from a blow jolt blunt shock impact ball motion sensors acceleration deceleration or a penetrating head injury. And in conjunction with this trauma event there's usually some type of disruption or impairment in the functioning of the individual's brain and this impairment functioning can actually very quite greatly among TBI incidents.

[00:07:55] But the National Institutes of Health have said you know the deficits can result in physical cognitive and psychosocial functioning and that's the more immediate consequence of the traumatic event. And then third the days weeks months leading after the event the individual usually experience a range of symptoms including headache disorientation unconsciousness amnesia seizure skull fracture intracranial lesion or even death. And again these different levels of symptoms severity experienced following TBI depend a great deal on the type of injury and then also that individual's personal medical history especially important is the number of previous TBI events that individual may experience. And usually the severity of a TBI event is categorized in terms of the length of unconsciousness an individual experience following events and usually a mild TBI well usually culinary referred to as a concussion usually has a loss of consciousness ranging from a few seconds to a few minutes three even 30 minutes and then you move up to moderate TBI which has a loss of consciousness 30 minutes to 24 hours. And the most severe kind individual can be unconscious for greater than 24 hours. So that's interesting and significant when you did your research when you were looking at these huge. How did you do that. Did you interview them or was it a review of the literature using your framework as a way to help you understand that. I'd be curious about it. It was mainly a review of the literature and particularly I've been trying to do a systematic review of all studies that have tried to measure traumatic brain injury history for incarcerated juveniles or adults. And I've come up with about 22 studies that have done this type of research in the United States in the United Kingdom and Australia specifically with people that are incarcerated.

[00:10:04] And again what's really hard to get out when looking at these studies is comparing what TBI is across the studies because most researchers have used it just like a self report question to ask respondents. It would be a sit down interview with an individual now ask Have you ever

experienced any event of a loss of consciousness for a specified period of time in your life for example parent at Howard in their article. They asked respondents have you experienced a loss of consciousness for 20 minutes or more and there was actually a meta analysis done by a psychologist by the name of Thomas Freyre who's at BYU in 2013 and they actually noticed that there are so many varied approaches to measuring TBI history that really a person's across studies is really difficult. And basically what I've come to find or what I would like to propose in the article is that there do exist a reliable and validated tools of measurement for TBI history such as the Ohio State University traumatic brain injury identification method and the traumatic brain injury questionnaire. And they've actually both had reliability and validity analyses done on them but that's mainly been done with military personnel and adults involved in the criminal justice system. They still haven't validated it within a population of incarcerated youth. But I feel like the field needs to move towards a more systematic way to measure it. So you can kind of get a better grasp of the problem and not being relying on just simply one question yes or no. Did you experience a loss of consciousness. Are they long assessment protocols or are they just something that a social worker could do as part of their normal assessment process. Absolutely.

[00:12:03] They're actually fairly straightforward. This is a very systematic way. So for example the Ohio State University TV identification method is an outline of how to identify a broad list of injuries and then how to start to narrow that down and really drill down into the events that resulted in some type of loss of consciousness because a big issue is that most incidence of TBI or concussions are never documented officially anywhere researcher by the name of Karen Hox and her colleagues. And 2009 actually detailed that 85 percent of all TBI eyes or concussions are never documented. So when youth comes into the criminal justice system and we try to administer a TBI assessment can be difficult to be 100 percent for sure because nothing to truly valid against these are just very systematic methods. So you're definitely covering every possible incident that may have resulted in a traumatic brain injury unless you're really exploring the question which may not have been adequately explored earlier. Exactly it kind of moves beyond that. Yes no kind of gives an individual a framework to talk to an individual about their history of maybe experiencing these events prior to them coming into their office for the assessment. I see. Given the fact if you looked at a number of the studies in your own work and looking at some case studies that came across your desk I was wondering did you walk away or did you come away with the idea of prevalence or how significant of an issue this is for policymakers that becomes really important.

[00:13:44] As you well know they're going into devoting resources that are going to want to be thinking that you know this is a significant issue and we need to pay attention to. And of course the she'll follow up question then What a. It starts off with that study by Ryan Perry and Matthew Howard who did the census basically all incarcerated youth in Missouri and they found that eighteen point three percent of all incarcerated youth reported a moderate or severe TBI. So the self reported that they were unconscious for 20 minutes or more. And I've actually then tried to pull data from large epidemiological surveys conducted by the National Institutes of Health and also one done up in the northeastern United States and they found prevalence rates for TBI. Again the definitions are a little fuzzy but they found rates between 3 percent and a point five percent. So that's at least three four times greater within the incarcerated youth that parent and Howard found. And then most recently forever and colleagues they actually conducted a Met analysis on five studies measuring TBI within incarcerated youth and then youth that were not incarcerated in the U.S. and the UK and they found that the incarcerated youth had a three point three to eight times higher odds of having TBI than controls. So fairly systematic studies have shown that the rate of TBI is quite high in this population. That's interesting because I'm a policy maker says I've got a significant issue with a population of providing service to a person has a TBI and that's saying they have had that experience. How might that manifest itself or might lead to someone becoming more likely to find themselves in a law violating the scenario or incarceration.

[00:15:45] So when researchers have looked at traumatic brain injury anywhere in the area that it most often impacts it's usually an area of the brain called the prefrontal cortex which is the area right behind your forehead and like kind of down below your eyes. That front area of your brain because usually when a TBI occurs your brain actually will move within your skull a little in most of your skull is actually fairly smooth except for the area right around your eyes. There's actually some like jointed or pointed bones there that are more likely to create injury. But aside even from direct injury on that area traumatic brain injury can also affect the connections between cortical areas such as the prefrontal cortex and subcortical areas you know such things as like the emotional center of the brain or other more or less conscious cognitive processes. And psychologists by the name of Laurence Steinberg he's actually done some theoretical work around the effect of prefrontal cortex on adolescents and youths as they age into young adults. And he's found that the prefrontal cortex actually works to moderate risky behaviors exhibited in adolescents and young adults. And basically this is traded by the fact that the prefrontal cortex begins to obtain greater control over and coordination with the subcortical systems and kind of starts to allow an inhibition of impulsive and risky behaviors that may be worrisome more likely to occur when they were 13 14 15. So youth that may have had damage to the prefrontal cortex or the connections between the prefrontal cortex and other areas of the brain. And Steinberg calls this the cognitive control system.

[00:17:46] These effects from those injuries may actually make the youth more likely to exhibit impulsive or risky behavior just because that inhibition has been broken down by the injury shown for me I know thinking out loud makes the possibility that the individual the LSM may find themselves involved in criminal behavior or behavior and it's against the law. They might be more likely to become involved because of impulsivity or those executive functions not kind of mediating those behaviors. Yeah actually it functions. And I feel like it's more of an indirect effect especially for youth returning from incarceration as a lot of these tasks that are these processes that are associated with the prefrontal cortex are such things as like self-control planning organizing problem solving and goal directed behavior. And when a lot of these youths come back into the community many of the tasks they'll need to complete to stay out of the correctional system for example you know attending school engaging in treatment bonding to other prosocial and Russians is made more difficult by the fact that they may have some difficulty in maybe having self control or maintaining a goal directed behavior to obtain a specific goal. So little interest me the most is not so much like something that would be really pronounced from a TBI but those effects from TBI that may become more noticeable as the youth starts to engage in more complex tasks and how their inability then to engage and be successful at those tasks in prosocial situations that actually decreases their ability to be bonded to individuals that have mentors that will allow them more prosocial opportunities just from the fact that they are having less opportunities to engage in prosocial behavior that increases the likelihood that they may engage in delinquent behavior. So I don't think it is necessarily a direct effect.

[00:20:00] It's more of a another important risk factor to consider in kind of an overall risk and protective framework that can interact to increase the odds of an individual potentially incarcerated. I see it's a much more global kind of thinking that we need to have in this particular case. Yeah I mean it's definitely not like the youth has one traumatic brain injury then they're going to end up incarcerated it's more. How does that advance in the nuanced effects that can have on an individual's ability to participate successfully in school with prosocial peers then how does that then result in the type of bonds they create and the community and what type of behaviors that's reinforcing for that individual. I see. This leads me to the next question. I know we live in a time when evidence based practice is an important part of professional social work. So I'm curious do you know or can you recommend or are there evidence based interventions or even interventions in general that might be effective or attrition in working with adolescents who have traumatic brain injury. Yeah there are some actually some really great interventions that have come out of the cognitive rehabilitation literature and most of them actually have been centered in a clinical

situation and they're actually fairly straightforward. For example one is called Gohl management training and basically the intervention. All it is a state of was you know helping individuals to learn five simple steps about stopping to assess the current situation.

[00:21:43] Deciding on a goal than actually choosing the goal they want to pursue and then breaking that goal down into subgoals and then remembering and devising strategies to accomplish each of those subgoals as they move towards the ultimate goal they wanted to reach. The stuff I've seen literature is fairly like very difficult to integrate into a community based intervention that's working with incarcerated youth or any youth involved in the criminal justice system because right now a lot of these interventions again are really centered in the clinical setting. And one of the big questions in that field at the moment is actually how do they translate these practices that have been found to be effective in a clinical setting into the uncontrolled environment of a community setting. And the more research I've done into a I feel like social workers especially those perhaps working with the youth that are returning from incarceration could help integrate some of these evidence based principles in a country based program. For example I'm thinking maybe a social worker and a youth are teamed up in the community and go out and practice these principles together and slowly it's called prompting fading. So they would prompt them to remember these steps for certain goals for example maybe using public transportation or some other type of tasks to complete and then fading away as the youth is able to gain mastery over that process and the ability to obtain goals on their own thinking about that because there is a definite role for social work in working with individuals who have particularly adolescents who have or have been exposed to traumatic brain injury.

[00:23:33] This comes to mind because we have so many kids who come to particularly to a foster care system who because of child abuse or neglect but as well for kids who have had other kinds of problems in the home or in the community that there is a role for social work to help these kids become reintegrated back into the larger society and also to help foster parents and people who work in the institutional arena to bring those kinds of skills into the intervention plans for the kids are working with. Yeah. I've seen studies actually where teachers have done it in their classroom with the youth. I really feel like these principles could easily be translated into some type of community based program for youth involved in the criminal justice system. So we've kind of come a long way here and I'm wondering do you have any thoughts about where we go from here based upon some of the work that you've been able to do. I think the most important thing to star or things that we need to move towards is universal assessment of youth and all the criminal justice system for TBI history. And again if we do move in that direction we need to make sure that we're adopting the assessment tools that have been validated and that are reliable. Again such as the Ohio State University TBI identification method or the traumatic brain injury questionnaire to really get a firm understanding of exactly how extensive is this problem and is a potentially increasing especially with the higher rates of sports involvements and other things like that. Excellent points. We're kind of coming to the end here I was wondering if there are any last words that you'd like to leave the listening audience with.

[00:25:24] I think social work has great potential to really accomplish like trans disciplinary interventions such as ACMI based program using cognitive rehabilitation principles and also integrating neuroscience around stuff like traumatic brain injury and other issues into social work curriculum and interventions that can maybe help us move towards a more broad focus on how to address these issues as opposed to just the traditional types of principles that social workers rely on. I'm hearing more and more about that in the field today about social work reaching across the boundaries into other disciplines and not only bringing their information or what they have learned but also engaging them more fully in the intervention process. And that makes a lot of sense to me. Well Chris I'd like to thank you for your time. And I'm hoping that based upon what I've heard about your work here and the depths of work that you've done that you're able to continue moving

forward are either primarily or secondarily is maybe one of the side areas of your work but it sounds like it's going to be very important work for a population that sometimes doesn't get the kind of assessment and follow up that we would like to see to help them be successful in reintegrating themselves or bringing themselves back into the larger community. Absolutely. I totally agree. Well Chris thank you again. Thank you you've been listening to Chris Veeh discuss traumatic brain injury in incarcerated youth and the role for social work. We hope that you found this podcast enlightening. This is Charles Syms asking you to please join us again at in social work. Hi I'm Nancy Smyth professor and dean of the University at Buffalo School of Social Work. Thanks for listening to our podcast. We look forward to your continued support of the series.

[00:27:35] For more information about who we are as a school our history our programs and what we do we invite you to visit our Web site at [www.socialwork.buffalo.edu](http://www.socialwork.buffalo.edu).