Traumatic Brain Injury among Women and Trans Women who engage in Sex Work

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When you hear the words “traumatic brain injury” what comes to mind?

Definition of Traumatic Brain Injury

"An alteration in brain function, or other evidence of brain pathology, caused by an external force" (CDC Brainline.org)

The Centers for Diseases Control (2016) define traumatic brain injury as a bump, blow, or jolt to the head or a penetration head injury that disrupts the normal function of the brain; this disrupted function can be measured by change in or loss of consciousness.

Why should we care about “traumatic brain injury” what comes to mind?

Why Investigate Traumatic Brain Injury (TBI)?

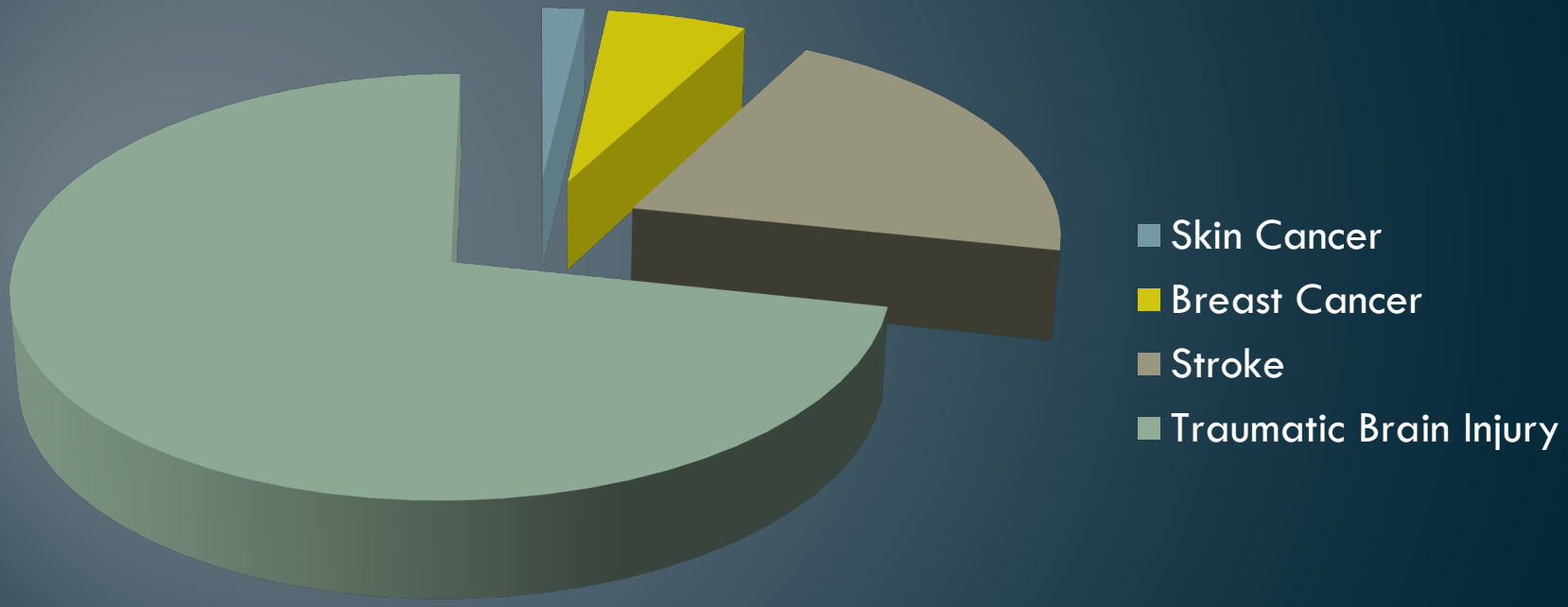
- TBI can adversely affect a person's quality of life in numerous ways, including cognitive behavioral/ emotional, and physical effects that affect interpersonal, social and occupational functioning.

Negative Impact individual

- TBI can negatively impact families, communities, and the economy.

Negatively Impact Community

Diagnosed Instances of TBI Compared to Other Well Known Illnesses



For Diseases Control and Prevention, USA Gov 2013

Traumatic Brain Injury (TBI) – The Silent Epidemic/Hidden Health Condition

- It is estimated that every year, 10 million people are affected by a TBI globally.

10 million affected globally

- In 2021, an estimated 640,000 people will suffer from TBI in Canada. By 2031, this number is expected to exceed 730,000.

2021- estimated 640,000
2031- expected to exceed 730,000

- According to the World Health Organization TBI will **surpass** many diseases as the **major** cause of death and disability by the year 2020.

2020 TBI major cause of death

People with traumatic brain injuries more likely to go to prison

For 13 years, researchers followed more than 1.4 million people who were eligible for health care in Ontario, Canada and were between the ages of 18 and 28 in 1997.

As reported in CMAJ Open, the open-access journal of the Canadian Medical Association, the research team linked subjects' health records to correctional records, adjusted for a variety of factors like age and substance abuse, and found that men with traumatic brain injuries were 2.5 times more likely to serve time in a Canadian federal prison than men without head injuries.

Female prisoners were even more likely to have survived traumatic brain injuries. For women with these injuries, the risk of winding up in a Canadian federal prison was 2.76 times higher than it was for uninjured women, although the authors caution that the pool of incarcerated females was small, accounting for only 210 of the more than 700,000 women studied.

McIsaac KE, Moser A, Moineddin R, Keown LA, Wilton G, Stewart LA, Colantonio A, Nathens AB, Matheson FI: **Association between traumatic brain injury and incarceration: a population-based cohort study.** ***CMAJ open 2016, 4(4):E746.***

Story by:
Ronnie Cohen

REUTERS

Traumatic Brain Injury (TBI) - Facts

- Severity of TBI classified as mild, moderate or severe, based on unconsciousness, score on the Glasgow Coma Scale and duration of posttraumatic amnesia. (Lverson, 2012)

TBI - Classification

- Symptoms of TBI headache, dizziness, fatigue, irritability, difficulties with concentration and memory, insomnia, and reduced stress tolerance. (WHO, 2015)

TBI - Symptoms

Traumatic Brain Injury (TBI) - Facts

- TBI is associated with higher mortality rates, behavioral and emotional problems.(Baumann et al 2018)
- TBI is prevalent among people of the criminal justice system.(Baumann et al 2018)
- TBI has high prevalence among people experiencing homelessness. (Baumann et al 2018)
- Prevalence of TBI in women involved prostitution, 53 % & 72%.(Farley et al, 2003, 2006)

TBI - Association

TBI – Prevalent in criminal justice system

TBI – Prevalent in homelessness

TBI – Prevalent among women involved in sex trade

TBI understudied in which population?

In a study in Minnesota of 105 women working in sex work, 72 % suffered TBI and face injuries which included, broken jaws, fractured cheekbones, missing teeth, punched lips, black eyes, blood clots in head, hearing loss, memory loss, head aches and neck problems. (Farley et al., 2011)

Violence is pervasive in prostitution and causes traumatic brain injury.
In a study TBI correlated among 66 women in prostitution
95% - hit with objects or have head slammed into objects,
61% - sustained head injuries in prostitution. (Farley et al, 2018)

Aim Of Study

Understand experiences of violence and head injury among females and transgender women sex workers

Methods

Study Design

Interview Protocol co-created by study team and E-Fry (Ohio State University TBI Identification /method & River mead Post-Concussion Questionnaire)

Sampling technique

Purposive Sampling

Study Setting

Elizabeth Fry Toronto Agency-support women who are, have been, or are at risk of being in conflict with the law

Study duration

Participants interviewed from November 2015- February 2016

Recruitment and Data Collection Procedure

Ohio State University TBI Identification Method (OSU TBI-ID)

Pre-defined scores from the OSU TBI-ID classified head injury based on the categories of head injury comprised:

- **No TBI** **no loss of consciousness** (LOC) or memory gap, or not dazed),

- **Mild TBI** **without LOC** (dazed, or gap in memory),
- **Mild TBI** **with LOC** (less than 30 min unconscious),

- **Moderate TBI** (**30 min to 24 h unconscious**), and
- **Severe TBI** (**over 24 h unconscious**).

Defining TBI in the Study

- If a participant reported a head injury that did not result in LOC, feeling dazed, or a memory gap, we considered this **an unclassified head injury** but not a TBI.

- If a participant indicated she lost consciousness, but for an unknown length of time, we classified it as a **mild TBI with LOC** (unconscious for <30 min).

OHIO Brain Injury Quantitative Report

Brain injury classification	Participants (n=10)	Incidents (n=10)
Mild TBI without LOC	7	14
Mild TBI with LOC	< 5	5
Severe TBI	< 5	< 5
Unclassified	8	19

Nine participants reported lifetime TBI, and six of these nine participants reported multiple TBIs.

Participants Experience of Violence Within Families

"That's the only way communication could be taught to me was I guess by beating me, slapping me, yelling at me, or saying something so horrible that you didn't have to hit me."

"They fought , and they drank , and they were alcoholics."

"My brothers raped me, but my father didn't rape me."

Ex-Partner Abuse Of Participant

" There is a bald spot on the back of my head from where he ripped my hair out and dragged me across the carpet floor."

Participants Abused During Street Sex Work

" I've had a knife pulled on me, I've had a gun pointed at my head. I've been raped and robbed by tricks"

"Started hitting me… he grabbed me by the hair.. and had me in his lap and he was pounding me in the head with his fists.

"I've got like thrown out of the car and not paid, punched in the mouth and kicked out, left on a deserted road."

Consequences of Traumatic Brain Injuries

"Short- term memory problems right now and I get constant headaches…my neck's out of whack"

Participants Management of Traumatic Brain Injury

"I didn't even go to the doctors ..but whatever, I figured the worst was my kidneys. I figured if I could get through it without having any blood in my urine, I was, I could heal."

"My head felt really hot and I looked and there was like blood. What I do is I put my head down right and in a matter of seconds there was a big pool of blood so I went 'Ah, quick, I'm bleeding, I'm dying .. They gave me two stiches."

Fear Seeking Medical Attention

"If I have to go the hospital, I'd lie and say I was drunk and fell or something stupid, like I was in a fight, drinking even though I wasn't. If I got punched in the mouth from a date, I'd just say you know, "I was drunk and got in a fight." I wouldn't tell the whole truth."

Negative encounters of Police

" The police look down on us. They think, 'Oh you got what you deserved. If you weren't out there it wouldn't happen to you, you know. But financially, they don't understand the struggles that we have to go through to make ends meet, right?"

"And was I made to feel like shit from them and was I treated like shit from the [local] police department, yes I was"

Women Deterred from Reporting Violence – Judged By Police

"Well if you weren't wearing that. Never mind what I was wearing, that's irrelevant and you know it. Doesn't matter what I'm wearing, I don't deserve this and you know that. All kinds of stigma and discrimination and bullshit."

Report Perpetrators When Had Corroboration With Fellow Workers

"I always tell girls on the corner the next night I go back to work, 'Yeah, I was attacked by this and that.' If it matches with someone else, then boom, when that happens, we usually go to the cops. It only makes sense right? We can all just say who our attacker was whenever. But still, other than that, you just feel alone. That's what it eh? A lot of us just feel like, it's just another story, I don't want to tell the girls."

Participants Voice – Anti-Oppression Training

"More trans people come in or maybe a couple of addicts, recovering addicts, and voice their opinion on how they should be treated, whether he's high or not."

Participants Suggestions To Health Workers on to Improve Services

"Care workers at the hospital should come out and see what it is like here at night. Come out and walk with us. If you don't walk the walk, how do you know, right?"

"There needs to be more trans workers everywhere. Not like just sex workers but, trans front-line workers, at OW, drop-ins, wherever."

Recommendation
Peer Led Education & Trans Front-Line Workers

"There needs to be more trans workers everywhere. Not like just sex workers but, trans front-line workers, at OW, drop-ins, wherever. Going to different drop-ins or like [sex worker organization] and doing small workshops like that with people."

"One participant emphasized that education should be peer-led: "It's a conversation, it's not a presentation, 'cause we're friends, cause we know each other'

Recommendation
Improve Safety and Harm Reduction Education

"I really think you should have a 24 hour safe sex drop-in, we really need that in Toronto, really, really do with a nurse on sight and some mental health crisis people.

The care workers at the hospital should come out and see what it is like here at night. Come out and walk with us. If you don't walk the walk, how do you know, right"

"Deborah proposed safety training: They can have some seminar and invite people. And tell them how to do it [sex work] properly and not get injured. Make some kind of booklet, and print it, then give it to…people working the street"

Recommendations
Education for Sex Workers and Service Providers

Create awareness among sex workers to enable them to assess the severity of their head injuries so they can make an informed decision whether to seek care or not.

Health care professionals and **police** require anti-oppression education to reduce discrimination towards people involved in sex work.

Peer-support programs may provide a mechanism to improve help seeking and an opportunity for education and improve health outcomes.

THANKS!

Any questions

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Acquired Brain Injury, Causes

Traumatic Acquired Brain Injury

Non-Traumatic Acquired Brain Injury

Acquired Brain Injury, Causes

Traumatic Acquired Brain Injury

- Falls
- Assaults
- Sports injuries
- Motor vehicle accidents
- Gunshot wounds
- Domestic violence
- Sports injuries

Non-Traumatic Acquired Brain Injury

- Ischemic stroke
- Hemorrhagic stroke
- Hematoma
- Aneurysm
- Seizure disorders
- Brain tumor
- Poisoning
- Opioid overdose
- Substance abuse
- Meningitis
- Enceplitis
- Hydrocephalus
- Vacuities
- Asphyxiation