

Traumatic Injury and Resilience Over Time

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Abstract: This article explores traumatic brain injury and resilience. Just like trauma, resilience is different from person to person. Yet there are a common set of factors established as contributing to human resilience. The work presented here explores my personal journey of overcoming adversity and finding a footing in life in the aftermath of an adverse life-transforming accident, through the lens of psychological literature.

Keywords: Traumatic brain injury; Resilience; Mind; Memory and positivity

I am a professor of Economics at a reputed college affiliated with the University of Delhi. I am also a nature enthusiast and an avid cyclist who enjoys covering long distances at high speeds. Along with possessing these attributes, I am the survivor of a traumatic brain injury acquired through an early morning cycling accident I had in May 2023. The injury I sustained on that occasion significantly impacted almost all the capacities I am supposed to have mastered as a professor and athlete. The accident emerged to be a life-transforming experience in more ways than I can count. This article is a space where I explore my attempts to make sense of one of the most unexpected events I have ever experienced. I also connect my lived experiences with psychological literature on trauma and the human capacity for resilience.

Trauma

By its very nature, trauma (defined as an emotional response to a terrible event like an accident or natural disaster) is complex and affects everyone differently. Some individuals may display criteria associated with Post-Traumatic Stress Disorder (PTSD) while others demonstrate brief sub-clinical symptoms that do not meet diagnostic criteria. People can have strong emotional reactions in the aftermath of a trauma exhibiting depression, anxiety, hostility and high levels of stress (Wiseman et al., 2015). Further, the impact of trauma may range from subtle to highly destructive. The specific effect on an individual depends on many factors including their personality characteristics, age, gender, the nature of the adversity they endure and

sociocultural factors (Hildebrand et al., 2016). Interestingly trauma has a close relationship with resilience, a theme that I will elaborate upon later in the article. My own experiences of recovering from brain injury have taught me that it is of utmost importance for us to navigate the trauma, by calling forth our capacity for resilience. According to the American Psychological Association (2020), resilience is the process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioural flexibility and adjustment to external and internal demands. I came to understand that a person must make a conscious decision somewhere during their recovery to manage their emotions, thoughts and behaviors in a healthy way so that they can get back to their lives.

Trauma Due to Injury

Traumatic brain injury is defined as damage to the brain resulting from an external mechanical force, such as rapid acceleration or deceleration, impact, blast waves, or penetration by a projectile (Cohen Veterans Bioscience, 2023). The degree of the injury can range from mild to severe, however according to the Lancet Neurology Commission, several people experience health loss and disability as an outcome. These result in major socio-economic burdens for individuals, families, communities and nations. Globally, the annual incidence of TBI is variably estimated to be 27 million to 69 million. Also called the 'silent epidemic', TBI remains a growing public health concern especially in low and middle income countries (Dewan et al., 2018). Hyder (2007) suggests that countries of the

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global south face a double-hazard with respect to TBI; they have a high prevalence of risk factors for TBI, while being the least prepared to address it when it happens. Therefore, both, the incidence of TBI and the case-fatality from TBI can be very high. In terms of long term outcomes and recovery, disturbances of cognition (often in the form of executive dysfunction), emotions (mood), and behavior constitute the most disabling aspects of TBI. The term neuro-behavioral disability has been used to encompass the diverse range of disabilities that may result in noticeable alterations in a person's character or personality. These changes can be a great source of stress to the patient and their family members (Humphreys et al., 2013).

Accidents and events that cause TBI involve damage to the nerve cells and tissues in the brain, due to which they can no longer efficiently communicate with the rest of the body. Brain injuries are not necessarily visible on the outside. When we have external injuries, everyone can see them and validate the fact that we are injured. However with a brain injury, we may not necessarily receive that validation. On the surface the person affected may come across as 'fine' but it is only the survivor who knows how the injury is impacting them. Research has indicated that TBI patients, whether recovered or non-recovered, tend to describe feeling that "something is not right after their injury" and talk about their efforts to seek clarification, explanations, a diagnosis, and a treatment plan. Many describe the process of seeking diagnosis and validation as a long and slow battle that can be stressful. Patients can have difficulty articulating what is different about their health to their health providers. When patients feel their symptoms and experiences are validated by others and acknowledged as known consequences of their injury, they describe feeling reassured, with peace of mind coming from the expectation that they will recover in time. Thus validation and reassurance appear to facilitate recovery and a coherent understanding of their experience. However, when participants feel their experiences and symptoms are disbelieved, they feel invalidated, stressed and confused (Snell et al., 2017).

Recovering from TBI means that the damage to brain cells and tissues must heal so that we can regain our ability to think, imagine and recall. However these healing processes can take a great deal of time and

harbour much uncertainty, because no one really knows how one's brain will operate after healing. Author Kelly Bernharn (2023), herself a TBI survivor writes that "the toll of traumatic brain injuries and the mystery of how the brain repairs itself, or doesn't, is still perplexing and under-researched". Healing is a step-by-step process and the time duration involved may easily range from 6 months to over a year (Sullivan, 2021).

My Injury and Experience

On that fateful summer morning of 2023, I was rushed to the hospital by a co-cyclist. I had had an accident and the doctors found that a massive brain injury, a cerebral edema along with multiple injuries in my head, hands and legs as well as a nasal blockage. I was completely unconscious for two days. My family brought me home after 11 days from the hospital. The following months were very difficult. I felt lost as I had no memory of what my life had been about, till the point of the accident. I did not know who I was, what I did or who the people around me were. I wanted to speak, but for some reason was unable to. Neither was I able to recollect any aspects of the accident that had brought me to the hospital. Even now, although several months have passed, I am unable to remember anything related to the accident. The trauma to my brain had impacted my vision and other senses- I suffered from double vision and had no sense of taste or smell. When I was being discharged, I had been forewarned that I was likely to endure headaches, shortness of breathing, chest pain, nausea, sleepless nights and irritability. During that time of sitting at home, I felt great regret over my decision to go cycling on that particular day. It filled me with anger and gave me sleepless nights. The anxiety I felt was often transferred to my partner.

It took me a month to remember that I was a teacher who taught Economics although I could remember nothing from the course material. Things that were central to my identity at one point of time had become inaccessible to me. This created an internal vacuum which was extremely emotionally draining. I would cry all the time and lament to my partner that I no longer knew what to

do with myself. My life had changed and the path ahead seemed unclear. I felt that I was no longer fit to teach, remember or read anything. I knew my visible injuries would disappear with time. I was far less confident about the injuries I had from within. Most modern trauma systems are structured around five essential phases of care: injury prevention, prehospital emergency stabilization and transport, acute hospitalization, rehabilitation, and reintegration with society. Although the medical system accessible to me adequately dealt with the first 3 phases, rehabilitation, and reintegration with society do not necessarily fall under the purview of hospitals. Yet as Rosenberg et al., (2020) suggest these are vital periods of recovery that patients must navigate, often on their own and with little guidance from their doctors. Very little research has been conducted on these final phases of recovery once contact with healthcare providers becomes less frequent.

What next after trauma: Resilience

Where does one go after enduring extreme hardship? What are we supposed to tell ourselves when we are overwhelmed with flashbacks of the past or the fear that the trauma will return in the future? These are very challenging questions to answer, but for me the answer to these lay in the human capacity for resilience. Among people with spinal cord injury, resilience has been associated with psychological strength, adaptive coping and spirituality (Monden et al., 2014). Further optimism, hope and perseverance have also been identified as important contributors to individuals' ability to adapt after injury (Monden et al., 2014). In the case of brain injury, resilience has been found to play a role in positive rehabilitation outcomes (Bertisch et al., 2014).

The impacts of TBI differ from person to person. Hence it is no surprise that resilience and its manifestations also differ for each one of us. The value of resilience lies in the fact that it helps us to rise above the loss of meaning in life, so that we protect ourselves. To be resilient means to re-construct meaning, when a prior sense of meaning has been lost. Psychiatrist and holocaust survivor Victor Frankl (1984) said "For the meaning of life differs from man to man, day to day and from hour to hour. What matters, therefore, is not the meaning of life in general but rather a specific meaning

of a person's life in general". Human resilience is an outcome of things that we often take for granted when our lives are on track. Although some psychologists regard resilience more as a trait rather than state (Rainey et al., 2014), to me, the social support of loved ones was crucial. Every time I wondered whether I would be able to lead life like I used to, my partner would reassure me continuously. They said that our minds and bodies become stronger everyday, when we think positively. The importance of positive thinking has been recognized by Zimmerman (2020) who suggests that the most resilient among us are people who generally don't dwell on the negative, who look for opportunities that might exist even in the darkest times. My partner's support during that time was critical for my recovery in many ways. Their faith that I would get better enabled me to believe in my own ability to overcome my hardships. A great deal of psychological research has shown the protective effect of perceived social support on mental health in stressful situations (Li et al., 2021; Bloom et al., 2001). Social support is critical because it helps us feel like we are a part of something larger than us (Schwarzer & Knoll, 2007). The commonly distinguished types of social support include emotional, instrumental, and informational support. Emotional support is the opportunity to be able to trust and share most often with a close confidant. Instrumental support refers to help with concrete needs for example through the supply of money or aid. Finally, informational support is the availability of advice or information regarding important issues at hand. My partner and my family provided me with all these forms of support, when I needed them the most. I also realized that recovery was about taking one step at a time. There is no magical wand that can be waved by anyone to hurry the process. One has to put in the time and effort to recover. We have to keep our minds active and stimulated. As someone keen to regain my health, I made sure I did just that. Initially when I had come home after the accident, I would struggle with my daily activities. After about 3 weeks, I was given a register and was asked to write my name and the basic activities I did every day. This was rather difficult to start with and I had to ask the others around me what I should jot down. But it got easier with time. I was also asked to sit with the laptop every day and read books or novels loudly. Once again I struggled - the letters were not straight, and I could not pronounce anything correctly.

I almost felt like a child in kindergarten. However, I persisted, every day for hours, sometimes reading loudly at midnight on my laptop or on kindle. And that is how change began to happen, for the better. I stopped having medicines once I could, as they tended to put me to sleep and did not let me think or read anything. For a while I was unable to walk on my own and neither did my family allow me to venture out of the house alone. It was after a month of returning home that my family allowed me to walk on my own. I initially started with short walks, marked by trepidation that I would not be able to walk the way I did earlier. But my fears were unfounded and after some time I began to walk and run regularly, even for long distances at good speed. Walking and running were helpful in abating the negative thoughts that had been troubling me. Finally after 3 months, I started driving again which had been unthinkable at one point of time.

I re-joined my workplace and started teaching again. Some struggles continued, for instance, I went to the washroom one day and wanted to zip my trousers, yet I was unable to identify where it was. In the face of these struggles, I persisted thanks to the support of my students and my own commitment to recovery. I would wake up at 4.30 AM each morning and fill page after page with all that I wanted to teach in class, so that I would remember it well. After my lectures, my students would reassure me that they could follow my teaching and this went a long way in re-building my confidence. I soon concluded that no doctor can tell us about how best to deal with trauma. There is no medicine that can heal TBI completely. Ultimately it is one's decision to get better along with the support of those around us, that counts for a lot. In fact this idea is supported by emerging empirical evidence. Rosenberg et al., (2020) conducted an exploratory qualitative study to better understand how patients view recovery after traumatic injury. Fifteen participants who were 1 to 3 years post-injury were purposefully sampled to include a range of ages, socioeconomic backgrounds and injury severity. The researchers found that the process of regaining a sound sense of self was essential to achieving favorable subjective outcomes. Participants expressed varying levels of engagement in their recovery process, with those on the high end of the engagement spectrum tending to speak more positively about their outcomes. They also reflected on key transitions in the recovery process, such as the transition from more structured

care environments (i.e., an inpatient facility) to less structured environments (i.e., home). No longer able to rely on institutional support systems to guide their recovery process, many patients found that the responsibility for recovery had passed to them and their own support systems, just as they had in my case.

Conclusion

Just as trauma is experienced differently by everyone, so is resilience. Although resilience comes from ordinary things in life, we must remember to build it brick-by-brick. I would say that if we want to cry after trauma, let us cry and express our emotions. Being emotionally expressive, whether it is through laughter or tears is not bad and certainly not a sign of weakness. In the initial months of my recovery, I met a young man who, like me, was walking very slowly. When we spoke to each other I came to know that he had suffered a spinal injury during swimming. He had stepped out of his home for the first time in 9 months. We were both struggling mentally and physically, yet he told me "Ma'am it happens but we will deal with it over time." His optimism helped to boost my sense of positivity. If I am asked how resilience is built, I would say that there are three things of great importance. The first is to have a sense of positivity, even when times are tough. The second is a sense of optimism that our struggles can turn us into better versions of ourselves. And the third aspect is to have a sense of meaning and purpose in life to which we are committed. Recently, I finished teaching one full semester and this involved correcting student assignments. These tasks might sound mundane to many, but for me were important accomplishments. The tool box I developed - reading for long hours day and night, walking for long hours, positive thinking, spending time with loved ones - helped me get here. Finally, I was able to write this article, a feat that was beyond my imagination for many months.

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