

# Brain injuries research paper sample

[Sociology](#), [Violence](#)



## **Abstract**

In this paper, I have discussed and explained two types of brain injuries i. e. Traumatic Brain Injury (TBI) and Acquired Brain Injury (ABI). I have written majorly about traumatic brain injury as it is the most frequent brain injury in individuals. I have focused on its occurrence, causes, mechanisms, treatment, and recovery. I have particularly written about the traumatic brain injury in children. Lastly, I have given several recommendations regarding the prevention of brain injuries. All in all, this paper comprehensively discusses brain injuries and how they can be treated and prevented.

## **Introduction**

There is no doubt in the fact that the brain is one of the most amazing organs in the human body. It is the control center of the body and is located within the protective skull case. It can be said that it acts as a central computer that is responsible for the coordination, control, and regulation of emotions and behavior. It helps people to think, learn, remember, dream, and communicate. It is also the major organ that shapes peoples' personalities and makes them human. In addition, it has the responsibility of carrying out basic body functions that are necessary for the sustenance of life. For instance, it regulates body temperature, heart rate, breathing, and blood pressure. It is not an untold secret that the failure to strictly regulate such functions may result in the non-survival of human beings (Stimola, 2012).

The brain is also vulnerable to injury like other body parts. As a consequence

of injuries, the brains' functions can disrupt. These may include “ loss of specific, localized functions, such as vision, use of a specific limb, or the ability to speak or understand the speech of others” (Stimola, 2012). In addition, brain injuries may also cause disruption of learning abilities, communication, and movement control. People who experience permanent brain injury become adaptive to the particular function loss. It can be said that they learn to live in a different way to balance their lives. However, those who have severe injuries are not able to live with independence or without the mechanical assistance. In the most extreme scenarios, death is the ultimate result of brain injury (Stimola, 2012).

The two main types of brain injury are Traumatic Brain Injury (TBI) and the Acquired Brain Injury (ABI). TBI is further divided into Concussion, Contusion, Coup-Countercoup, Diffuse Axonal, and Penetration. On the other hand, ABI is further categorized as Anoxia and Hypoxic (Cara & MacRae, 2013).

## **Traumatic Brain Injury**

Over the last few decades, there has been a considerable attention given to the study and evaluation of people who suffer traumatic brain injury, also known as TBI. Even though there are a number of physical disabilities that are linked with the mentioned condition, the psychological impairments are more common in TBI patients. These repercussions include attention deficit, memory loss, and disability of executive functions, difficulties in communication, and prominent changes in personality and behavior.

Psychology has played a major role in making psychologists and researchers understand the injury-related-mechanisms and recovery after TBI.

Psychologists have also played a central role in contemplating the nature of

the behavioral, emotional, and cognitive effects of TBI. In addition, they have also been successful in finding out the psychosocial consequences of TBI. Moreover, the study of TBI has also helped in the development of useful rehabilitation and supervision models. It is not untrue to state that psychology has contributed exceptionally to assist TBI survivors regarding its intricate and difficult problems (Gillard, 2012).

## **Occurrence of Traumatic Brain Injury**

Motor vehicle accidents are the major reason of the incidence of TBIs (moderate to severe). The other causes of traumatic brain injuries include sports injuries, bicycle accidents, assaults, and falls. Sports injuries are a major cause of a higher percentage of mild brain injuries. Falls, on the other hand, cause more aged people to suffer from brain injuries.

The incidence of traumatic brain injury is predominant in young male adults. A major number of such accidents occur due to excessive substance abuse and adventurous behaviors. TBIs may also have an association with a psychiatric disorder in the past, inadequate educational acquirement, and an unsteady job history. These adolescents may still be going through the process of gaining independence from parental support, finishing their schooling, vocational skills' development. Some may be in the process of starting personal relationships and creating new social networks. However, the occurrence of traumatic brain injuries may have a great effect on their abilities, mostly psychological in nature. TBIs have the propensity of upsetting the ability to achieve the important goals in life. As a consequence, the sufferers develop negative perceptions concerning their selves. They tend to develop a negative self-concept, reduced sense of worth,

hopelessness, dejection, and anxiety. It becomes extremely difficult for them to survive in a society that judges people on the basis of their apparent abilities and disabilities (Gillard, 2012). TBI patients suffer a lot psychologically, together with physical disabilities.

## **Mechanisms involved in Traumatic Brain Injury**

According to neuro-pathological evidence, there are a number of mechanisms that are involved in brain injury. Some of them are operational at the point of impact whereas others are simply a result of complications that are secondary in nature. As a consequence, there is significant heterogeneity of damage in almost every affected person. The forces of acceleration or deceleration may become the causes of scalp laceration, skull fracture, and intracranial contents' shifting. Individuals may also experience other complications that may include respiratory arrest, swelling of the brain, infection, and higher intracranial pressure. In general, traumatic brain injury results in instant loss or mutilation of consciousness. This condition is usually followed by post-traumatic amnesia (PTA). This is also referred as the period of confusion. TBI severity is measured by the PTA duration and coma's length or depth. The latter is measured by making use of the Glasgow Coma Scale (GCS).

## **Psychological Effects of Traumatic Brain Injury**

In the majority of TBI cases, the individuals who sustain such injuries become emotionally, cognitively, and behaviorally disable for long periods of time. As the imaging technologies are limited, it is not possible for researchers to elucidate TBI effects. However, clinical neuropsychologists contribute vitally

in the delineation of the behavioral and cognitive effects of TBI. They have also been successful in marking out and describing the residual strengths that may help in overcoming difficulties.

Individuals suffering from mild TBI may experience a number of symptoms that include headache, wooziness, low energy, distorted or double vision, noise or bright lights' sensitivity, agitation, sleeplessness, reduced thinking speed, attentiveness problems, memory loss, bad temper, nervousness and hopelessness, and poor sense of balance. The recovery timeframe is variable. However, most cases resolve within a period of three months. However, more or less twenty five percent of TBI cases continue to be difficult and result in noteworthy unending disability and regulation problems. On the other hand, individuals who suffer moderate to severe traumatic brain injuries develop exhaustion, attention deficit, and reduced information-processing speed, difficulties in learning new things, word-finding problems, and mental flexibility. Thus, it is a challenge to treat TBI patients as every individual has different condition.

## **Traumatic Brain Injury in Children**

TBI incurs different effects in children as compared to adults. There is a major difference in the TBI causes. These include increased incidences of child abuse in toddlers, and a higher percentage of falls and bat and ball injuries. At the same time as there is a lower mortality rate in children with TBI, they demonstrate a better recovery in motor and sensory skills.

However, the evidence clearly suggests that TBI frequently cause permanent impairment in the spheres of reminiscence, concentration, performance speed, and abstract thinking. Such lifelong impairments also make the

attainment of education difficult. It is worth mentioning that children with traumatic brain injuries also experience difficulties in social interactions, just like adults with TBI (Gillard, 2012). TBI children tend to socialize less due to this factor.

## **Treatment of Traumatic Brain Injury**

If brain is damaged by TBI, the individuals are needed to take treatment and rehabilitative measures for a long period of time. In general, physicians recommend physical and occupational therapy for helping the patients regain their abilities of performing daily tasks. Such therapy is also intended to make them as independent as possible. In addition, TBI patients are also given speech and language therapy (Gillard, 2012). This kind of treatment helps them to understand and produce language. Moreover, it helps them in their daily-tasks' organization and in the development of problem-solving methods. Counseling is another type of treatment that helps TBI patients understand their feelings and thoughts. Counseling also helps them in learning ways for coping with their emotions. Such treatments facilitate TBI patients to feel controlled and get back to the daily activities of their lives. Support groups and social support are great opportunities for TBI patients to converse with people who experience same things. It also helps family and friends of such patients to help them receive appropriate treatment and deal with their symptoms. Medicines are also helpful in relieving symptoms such as insomnia, headaches, and chronic pain. Medicines are also helpful when TBI patients suffer fretfulness, depression, or problems related to memory.

## **Acquired Brain Injury**

Acquired brain injury is “ the acute onset of a brain injury of any cause, including trauma, stroke, tumors, anoxia, infection, and other toxic or metabolic causes” (Columbus, 2006). ABI brings about cognitive, emotional, physical, and behavioral impairments and neuropsychiatric disorders (Columbus, 2006).

## **Prevention of Brain Injuries**

A good number of injuries causing brain damage can be prevented by following some rules. It is to be remembered that a child must never be shaken. Moreover, installation of window guards can also keep kids to fall out of open windows. In addition, playgrounds must be installed with shock-absorbing materials. It is also required to wear helmets while riding on cycles or playing sports. Brain injuries are also preventable if drivers drive in a careful manner and wear seatbelts. Stairways with installed handrails can also help in preventing falls and subsequent brain damage.

## **Conclusion**

Without a doubt, brain injuries create difficult and complex problems for both the sufferers and their families. It is important for the authorities to develop an understanding of problems related with brain injuries. They are also required to raise community awareness concerning brain injuries and identify effective care models. Extensive contributions must be made for bringing improvements in patients’ quality of life and that of their families.



## **References**

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