

Phineas gage

Psychology



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Phineas Gage is considered to be one of the severe brain injuries. Gage suffered from personality changes after the brain injury. Gage was injured when excavating rocks to create a path for railroad track. Gage and other employees were injured by rail roads during the construction work. Gage was later treated after the accident as he his brain had been damaged. The accident caused damaged to brain structures and doctors argued that Gage started behaving differently after the accident (Damasio, Grabowski & Frank, 1994). The Phineas Gage accident helped explain the role of the brain in cognitive functions. The accident revealed how the brain areas support cognitive functions. There are various brain areas that support cognitive functions. For example, the left frontal region helps in personality development. After the accident doctors examined the skull to see the lesion that caused personality change. The lesion was found in the left frontal region. The lesion affected personality development and led to loose of personality. Also, during the accident the left and right prefrontal cortices were damaged. This affected rational decision making and processing of emotions. The study of the Phineas Gage skull helped doctors understand how the brain works. It helped them associate various parts of the brain with cognitive functions (Damasio, Grabowski & Frank, 1994). Brain is an important part of the body. Researchers claim that the brain plays an important role in the human body. Along with controlling the body functions, it also helps control the cognitive functions that differentiate human beings from other animals. Body process, thoughts and movements are controlled by the cognitive part of the brain. Cognitive functions result from the cerebrum. The cerebrum consists of the frontal lobe, temporal lobe, parietal lobe and the occipital area. The areas carry out different functions (Damasio, <https://assignbuster.com/phineas-gage/>

Grabowski & Frank, 1994). There are various types of cognitive functions. Examples of cognitive functions include learning and memory. Other functions include perception, movement and problem solving. There are other functions that require coordination from various parts of the brain. That is reading, speaking and learning (Damasio, Grabowski & Frank, 1994). Cerebrum contains brain cells that help in learning. Learning involves acquiring new skills from the outside world. People acquire new skills through stimulus. The stimuli are transfer to the brain. Brain cells help people in learning. The brain relies on neurotransmitters to send signals from one part of the brain to another. The neurotransmitters are released by nerve cells and they help in carry out cognitive functions like learning. The brain cells are damaged during accidents and this makes it hard for people to learn. The cells are worn out and this affects learning. This is according to the study carried out on Gage skull. The study revealed that the cerebrum is responsible for learning (Damasio, Grabowski & Frank, 1994). In addition, the cerebrum helps in memory processing. There are various cells in the cerebrum that are responsible for memory. Old people experience loose of memory because the cells responsible for memory are worn out. Also, the nerves do not release neurotransmitters. This makes it hard for the brain cells to carry information from one part of the brain to another. Also, people who have been injured in an accident experience loss of memory. This is because the brain cells are damaged during the accident. The hippocampus is responsible for memory processes. It helps transfer information from short term memory to long term memory. When the brain is injured the hippocampus is affected and this affects memory process. This makes it difficulty for people to transfer information from the short term memory to

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long term memory. The study showed that the hippocampus is important in memory processing (Damasio, Grabowski & Frank, 1994). Moreover, the brain helps in problem solving and reasoning. Cognitive functions in the brain require transmission of signals from the left hemisphere to the right hemisphere. The corpus Callous helps transmit signals between the two hemispheres. For example, the signals received from the right side of the body are transferred to the left side of the brain. Also, the signals received from the left side of the body are transferred to the right side of the brain. The signals are processed in the right side and left side of the brain. The two sides are considered dominant at one point. For example, the left hemisphere helps in problem solving and reasoning. People who have experienced accidents have difficulties in solving problems. They are unable to solve minor problems like financial calculations. This forces them to seek assistance from other members in the family. The left hemisphere might be damaged in an accident and cause difficulties in problem salving (Damasio, Grabowski & Frank, 1994). The brain helps coordinate movement. There is a motor area behind the frontal lobe that helps coordinate movement. The area allows voluntary movement and this makes it easy for someone to move from one place to another. The motor area might not function well incase of an accident. This makes the person to have difficulties in movement. Lastly, the brain plays helps manage emotions. Gage was not able to manage his emotions. This affected his relationship with other people. It resulted to conflicts as Gage could not handle his emotions. Thus, the emotional changes revealed that the brain is responsible for managing emotions. It also revealed that the brain is important when it comes to reasoning and personality development (Damasio, Grabowski & Frank, 1994).

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