

Good case study
about there were four
postulates that were
researched upon
using ...

[Health & Medicine](#), [Nursing](#)



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Introduction

For those uninitiated, the brain has two hemispheres which is connected with corpus collosum. By cutting the corpus collosum of the brain, the communication between the right and the left hemisphere of the brain is hampered. It was found that by doing this, the seizures among epileptics could me marginally controlled. Now the experiments were conducted on four patients. Following are the thesis points of the experiments/research.

Thesis Propositions:

- Will the right hemisphere of the brain be able to communicate with the left hemisphere of the brain if the corpus collosum was severed?
- Will the patients with a severed corpus collosum be able to speak and understand in the same way as before?
- Will the quality of life of the patients with severed corpus collosum be same

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as that before, that is, the normal way of life?

- Will other senses like the sense of touch, hearing or vision be affected by the severed corpus collosum?

Methodology:

Since the main purpose is to identify the effect of severed corpus collosum on the sense of touch, hearing and vision, the tests too were performed based on these facets. There were three tests that Gazzaniga performed on his patients:

- Visual Tests: The patients were given a picture or a word to only one visual area (that is either left or right). If the picture was sent to the left, the right hemisphere gained this information through the eye receptors. Similarly, if the cue was given to the right, the left hemisphere gained the information.

- Tactile Tests: These tests were performed to recognize the change (if any), in the sense of touch. The subjects were guided to touch or feel the object under the table. At times, the visual and tactile tests were performed simultaneously by projecting the image of an object into one hemisphere, while asking the subject to search for that object amongst several others with either of his hands.

- Auditory Tests: In order to identify the effect of the operation on the subject, the subjects were asked to look for or feel an object into a bag with their left hand and state out what the object was.

Results

Before moving on to the experiment results, it would suffice to know that all the subjects who were operated upon in order to severe the corpus collosum

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behaved normally and the same way as before the operation. Their physical traits, personality, characteristics and intelligence levels were in no way affected by the experiment/operation. In fact, the operation helped them get rid of the seizures and hence a lot of relief was brought on to these epileptics. It is not to say that certain changes were not observed amongst these subjects. Some of the changes and results of the tests conducted above are mentioned below:

- It was found that both hemispheres in the brain have the ability to see, however, only one hemisphere (left) has the ability to speak. Therefore, for the subject to speak up the object name, the image should be sent to the left hemisphere.
- In keeping with the first postulate, when the object was placed in the right hand of the patient, he could state what the object was. However, when the object was given in his left hand, the subject could not speak the name of the object. Nevertheless, the subject was able to match the object with a similar object, thus showcasing that the subject recognizes the object. It is only the ability to speak that is affected when the image is sent to the right hemisphere.
- Furthering on the same research, the subjects were asked to pick out from a grab bag a particular object from his left hand. This the subject could easily do. However, when asked to state the name of this object, the subject could not speak out. This further established that even though the right hemisphere could identify the object, it could not speak the name because the speaking centre of the brain - the left hemisphere - could not receive the signal from the right side due to severed corpus collosum.

- This establishes that the left hemisphere is the speech centre of the brain, while the right hemisphere is better with spatial relations.

Findings

We are also aware of the fact that our left brain specializes in functions such as writing, calculations, math, speaking, reading etc, while being the centre for language. On the other hand, the right side of the brain is more adept in solving spatial problems, recognizing faces, creativity and reasoning. With this information, it is easier to focus the course of the treatment on the particular side of the brain affected by a stroke or brain damage.

Critics

While the study itself is not under the scope of criticism, it is the way people and researchers have used this study that comes under the scanner. Instead of focusing on the ability of the two sides of the brain, it would be better to focus on how to integrate the two sides of the brain in such a manner so as to heighten the brain processing ability and therefore, brain performance.

Reference List

Hock, R. R. (2013). *Forty Studies That Changed Psychology: Explorations Into the History of Psychological Research*. London: Pearson.