

Title: Does being stuck with people
for too long hurt your brain

Introduction:

Being in quarantine has restricted many people to stay inside their homes for a majority of the time. People who usually don't spend 24 hours with their loved ones and family are now being exposed to more frequent interactions with these people. This change impacts the brain and can cause people to feel overwhelmed. The purpose of this research is to analyze how individuals' brains react when surrounded by people more frequently. By analyzing this, we can gain a better understanding of how our brains respond to increased human to human interaction. This experiment will use EEG (Electroencephalography) to record the amount of electron movement in different people's brains. Combined with data from tests and surveys that will be used to objectively observe a person's ability to mentally function, this research will give us more insight than we previously have had. If the conclusion can be made that people's brains are overstimulated with human interaction then it could show that being enclosed with people for too long can be harmful and that individuals do need some distance in order to properly function. Previous experiments have explored how neurological disorders impact cognitive ability and how human brains respond to stimulation from computers.

Narrative:

This grant will be used to research a human's capacity to interact with other people over time. We will collect 100 participants, each from different households, from a range of ages between 25-30 in order to run this experiment. Each person will receive an EEG machine and instruction on how to use it. Each day, an individual will put on the machine at the start of the day, middle of the day, and end of the day. People will be grouped into 3 groups; people who live alone, people who live with one other person, and people who live with 2 or more other people. The group that lives with one other person will be used as the control group because they are the intermediate of the 2 groups. We can compare data between each of the groups and analyze how people's brains who interact more react versus people's brains who interact less.

Budget:

Equipment:

EEG devices (includes pads, wires, and data recording device) x 100 = 50,000 USD

Devices can cost between 100-1000 USD. These devices can also be reused for other researchers afterwards. If the U of A currently holds any of this equipment, it would be cheaper to borrow that.

Personel:

Volunteers will be paid 11 USD, per day over a month(30 days) long trail. = 33,000

Co-researchers will be paid 12 USD, per day over a month(30 days) long trail = 36,000

Lab Space:

Due to the nature of this research being mainly done at volunteers homes

and the only task researchers are responsible for is analyzing data, this can all be done from home and online

Total Requested Budget: \$119,000 of money and equipment.

Advertisement:

To post this on social media and the internet (facebook, instagram, youtube, any U of A websites) won't cost us money. This aspect of the research should not require any money

Total Expense

Goals:

- Record the electron activity of 100 people in arizona each day

- Acquire the funding and equipment from the U of A to provide wages for volunteers, staff, and to run the experiment by (insert planned start date of experiment here)

- Acquire 100 volunteers from different households and ages from Arizona by advertising wages and participation in a simple experiment by (Insert start date of experiment here)

(Problem Statement):

Globally, mental health is a subject that is not fully developed yet. As a country, we have yet to establish an easy-accessible mental health care system. Mental health is not a subject taught in schools and people struggle to deal with it. This impacts us; we ourselves struggle and as a society, we struggle to function. Suicide was the leading cause of death in 2017 and suicide rate only increased in 2018. By understanding more about a human's mental capacity to interact with people, we, as a society, would begin progressing towards an outcome where mental/emotional issues can be and are addressed.

Evaluation:

My research project explores the relationship between humans and their individual interactions with more people. Research in the field of neurology and neuroscience have shown the relationship that computers and technology have with people. Studies have also explored the human condition and neurological mutations/ailments that hinder people. Both of these specific topics within neuroscience have been explored because of the negative impacts of these topics. Little, if any research has been done on a typical human brain in regards to its cognitive ability when exposed to society. My study will further the understanding of people by exploring how constant exposure to people impacts our mental state.

Sources (so far collected and read) -

Link:

https://arizona-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=01UA_ALMA51523195960003843&context=L&vid=01UA&lang=en_US&search_scope=Catalog

g Adaptor=Local%20Search%20Engine&tab=catalog query=any,contains,Human%20interaction
%20brain%20stimulation&offset=0

Link

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%20stimulation&sortby=rank offset=0](https://arizona-primo.hosted.exlibrisgroup.com/primo-explore/fulldisplay?docid=01UA_ALMA51610883750003843&context=L&vid=01UA&lang=en_US&search_scope=Catalog Adaptor=Local%20Search%20Engine&tab=catalog query=any,contains,brain%20over%20stimulation&sortby=rank offset=0)

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