

SCIENCE FAIR LOGBOOK
2021

AYESHA SAAD
7B



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TIMELINE

Thought about the topic regarding mental health and mood disorder, then finalised the topic.	Dec 07, 2020
Came up with a question.	Dec 20, 2020
Researched about mental health and mental illness.	Dec 23, 2020
Found about mood disorder and its relation to mental health.	Dec 24, 2020
How it affects various age groups.	Dec 25, 2020
In-depth research about youth mood disorder.	Dec 25, 2020
Researched about types of mood disorders.	Dec 27, 2020 - Jan 04, 2021
Made my hypothesis.	Jan 05, 2021
Identified the variables.	Jan 05, 2021
Created the questionnaire for the investigation.	Jan 05, 2021
Got the responses.	Jan 07, 2021
Created bar graphs to show data.	Jan 08, 2021
Analyzed the graphs to see if the hypothesis was correct.	Jan 11, 2021 - Jan 15, 2021

Came to the conclusion.	Jan 16, 2021
Figured out the application.	Jan 16, 2021
Listed the resources I used for research .	Jan 17, 2021
Made my acknowledgements to the people who helped me.	Feb 15, 2021

TOPIC

MOOD DISORDER ON YOUTH MENTAL HEALTH

QUESTION

What is the effect of mood disorder on youth mental health?

RESEARCH

What is mental health?

Mental health is a state of well-being. Emotional, psychological, and social welfare are part of Mental health. Everyone can have issues with mental health. It is important at every stage of life, from childhood and adolescence through adulthood.

Mental health can be affected if a person goes through a difficult life experience, or experiences too much stress. Having a mental illness does not mean one cannot take steps towards a better mental health. Good mental health would be someone who has:

- A sense of purpose
- Strong relationships
- Feels connected to others
- Has a good sense of self
- Deals with stress effectively
- Enjoys life

Achieving or maintaining a good mental health is not a one person journey. In fact, one's setting and situation and the people they interact with can affect one's well being.

Maintaining mental health means to work towards achieving positive perspectives within one's environment. Having a positive mindset can help one achieve a good mental health.

What is mental illness?

Mental illnesses are disturbances in thoughts and feelings that affect in day to day functioning. Examples include disorders such as depression & anxiety disorders, schizophrenia, and bipolar disorder. Unlike mental health not everyone has mental illness.

What is a mood disorder?

A mood is the way people feel, like happy and sad. Mood is affected by things which happen around you. For example, when something good happens you feel happy, and when something bad happens you feel sad. The feeling of happiness and sadness is your mood.

Mood disorder is a mental health problem which affects the person's emotional state. People refer to this sometimes as affective disorders or depressive disorders. Disorders are a group of mental health problems. A person with mood disorder experiences long-term feelings of extreme sadness, or hopelessness. When this happens it can affect our lives. It may even increase a risk of suicide.

How does mood disorder affect various age groups?

Mood disorder does not only happen with one age group. Anyone can experience a mood disorder. Some examples are:

- Ongoing feelings of sadness
- Thoughts of helplessness, or guilt
- Having low self-esteem
- Feelings of being useless

- Feelings of wanting to die
- Lack of interest in normal activities or activities once enjoyed
- Problems with relationships
- Sleep problems, such as insomnia
- Changes in appetite or weight
- A drop in energy
- Trouble in focusing or making decisions
- Repeated physical complaints, such as headache, stomachache, or extreme tiredness
- Running away or making threats of running away from home
- Sensitivity to failure or rejection
- Being negative, grouchy, or angry

What causes mood disorder in a youth?

There are chemicals in the brain which are responsible for positive moods, these chemicals are dopamine, oxytocin, serotonin, and endorphins. Neurotransmitters control the chemicals in the brain that are responsible for changes in one's mood.

A decline in one's mood happens when these neurotransmitters are blocked or your brain does not produce these chemicals. This occurs with environmental factors like unexpected life events or long lasting stress.

Why does mood disorder affect youth?

Mood disorders affect young people if they have experienced a traumatic life event, or gradual events that build up stress. A person could feel very depressed and it could last for a very long time. Mood disorders are very intense and a person can lose control over their feelings.

When does mood disorder happen?

Anyone could feel sad or depressed but mood disorders are more intense. They are more difficult to tolerate and can last for a very long time. Youths who have a parent/relative with a mood disorder have a higher chance of getting it but life events and stress can exaggerate feelings which are difficult to control.

Major life events can cause depression. Some examples are:

- A parent losing a job
- Parents getting divorced
- A death in family
- Family having money issues

Examples of mood disorders:

Along with other types of mood disorders, the two most common mood disorders are major depression and bipolar disorder.

Depression (major or clinical depression):

Depression is when a person feels sadness or grief over a tragic life event or crisis which happened recently. But, when one is still under deep depression after stressful events are over or a decent time period has passed, then it would be classified as major or clinical depression.

A person with major depression experiences low mood and loses interest in activities they use to enjoy. They can feel long periods of sadness or depression.

Bipolar disorder:

Someone with bipolar disorder can experience unusual changes in their mood, energy levels, activity and ability to continue with daily life. Periods of high moods are known as manic phases and depressive phases cause low mood.

Mania:

Mania is a period of extreme high energy or mood which can last a very long time. It is mainly associated with bipolar disorder. It is a change from which a person normally thinks or behaves and could last for weeks or months.

HYPOTHESIS

If a person has a mood disorder, then their mental health is affected. A person could suffer a mood disorder if they have experienced trauma. Mood disorders cause depression, which is not good for one's mental health.

EXPERIMENT / INVESTIGATION

To conduct this experiment, an online questionnaire via Google Forms was sent out to 25 students in 7th grade. The survey could not be done with more students because of covid-19 restrictions. The questionnaire included 15 questions that were based off of research about mood disorders and its causes. Once the survey was completed by the students, data was sorted and graphed that was analyzed to find a conclusion.

DATA ANALYSIS

Variables:

The Variables for the investigation were:

- Controlled Variable: The students grade and the survey questions
- Independent Variable: Mood Disorder
- Responding Variable: Mental Health

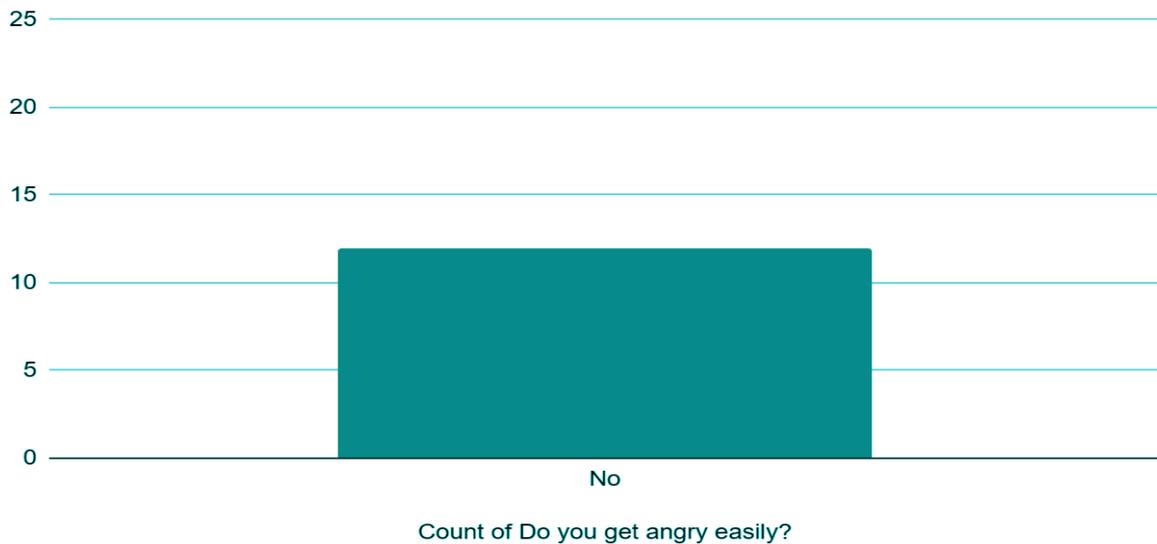
The data gathered through responses during investigation was correlated to find meaningful information about how one response impacts the other.

Graphs:

The responses from the questionnaire and their relationships with each other were analyzed and illustrated in graphs as follows.

1- These two graphs show a correlation that people who don't get angry easily have parents with a happy relationship.

Count of Do you get angry easily?



Count of Do you think your parents have a happy relationship?



2- These two graphs show a correlation that people who get along with their families don't feel sadness or hopelessness which does not go away.

Count of How well do you get along with your family?



Count of How well do you get along with your family?

Count of Do you feel insecure, hopelessness or sadness which does not go away?



Count of Do you feel insecure, hopelessness or sadness which does not go away?

3- These two graphs show a correlation that those who experience dramatic mood changes had a event recently which has affected them greatly.

Count of Has there been any event recently that has affected you greatly?



Count of Has there been any event recently that has affected you greatly?

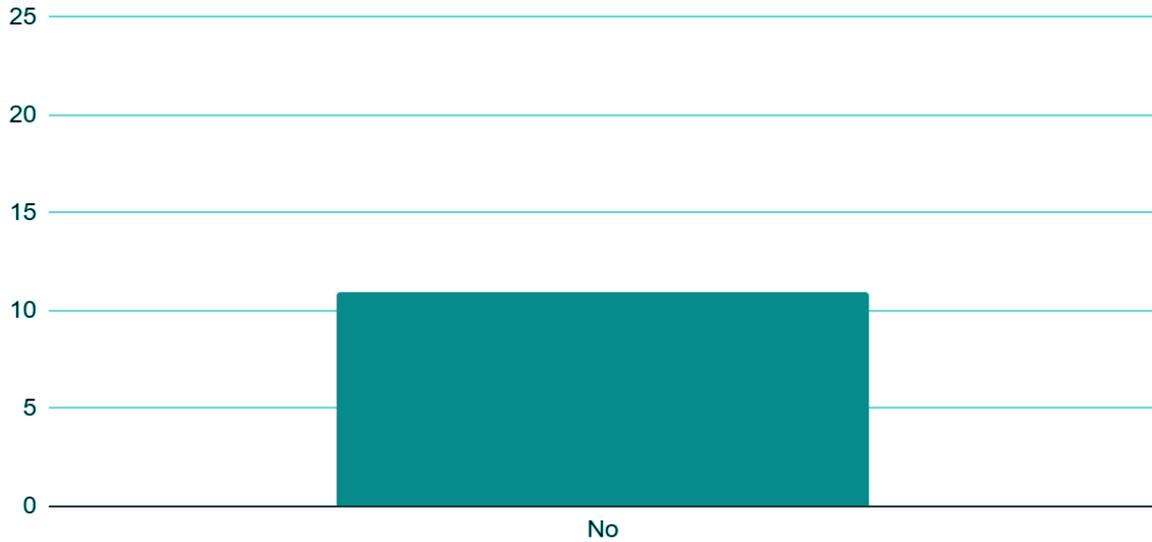
Count of Do you experience dramatic mood changes throughout the day?



Count of Do you experience dramatic mood changes throughout the day?

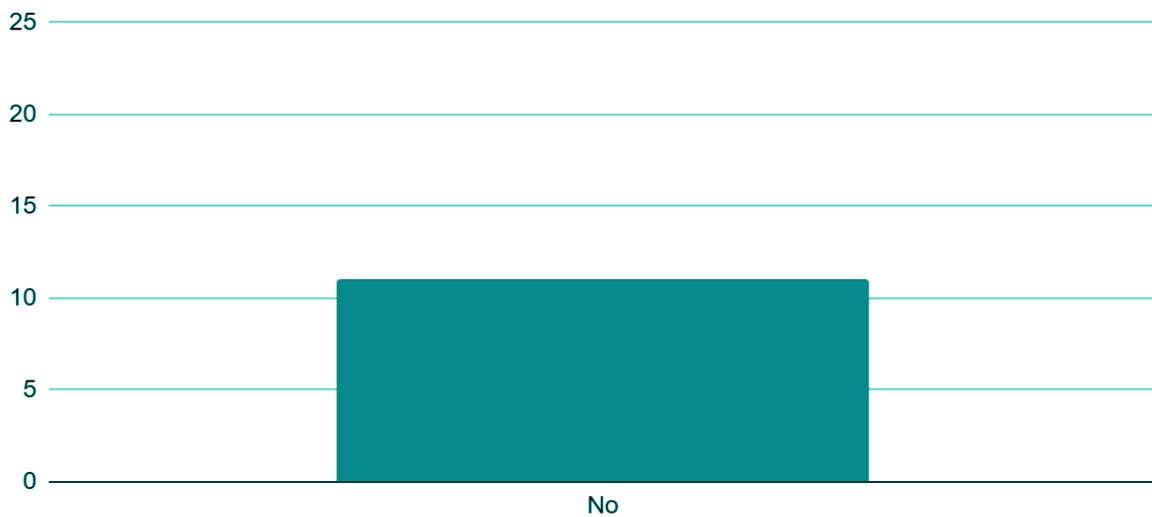
4- These two graphs show a correlation that someone who does not experience dramatic changes does not have family with Mood Disorder.

Count of Have any of your family had Mood Disorders?



Count of Have any of your family had Mood Disorders?

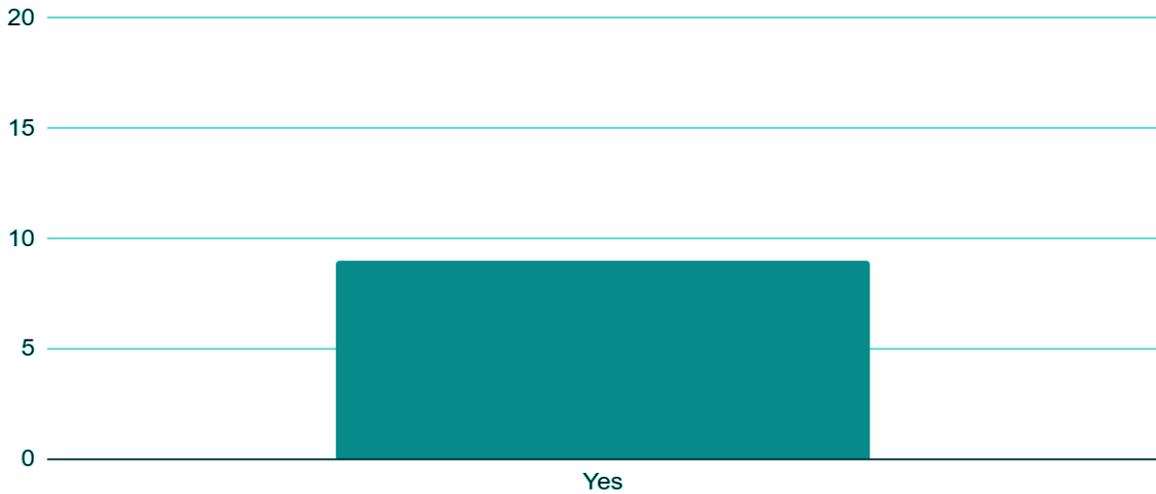
Count of Do you experience dramatic mood changes throughout the day?



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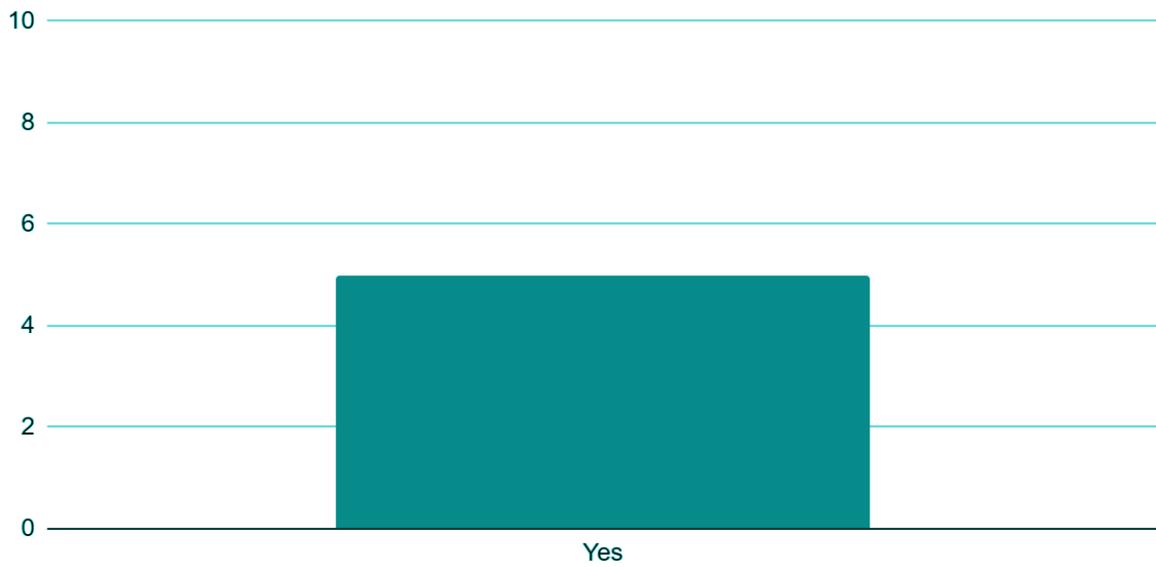
5- These two graphs show a correlation that whoever experienced dramatic mood changes gets angry easily.

Count of Do you experience dramatic mood changes throughout the day?



Count of Do you experience dramatic mood changes throughout the day?

Count of Do you get angry easily?



Count of Do you get angry easily?

6- These two graphs show a correlation that people who don't feel hopelessness or sadness have recovered from a death in their family.

Count of Has there been a death in the family that they have not recovered from?



Count of Has there been a death in the family that they have not recovered from?

Count of Do you feel insecure, hopelessness or sadness which does not go away?



Count of Do you feel insecure, hopelessness or sadness which does not go away?

CONCLUSION

In this project I have learned how mood disorder is a mental health problem which affects youth mental health. My experiment tells me my hypothesis is correct. In my data it shows how events can lead to mood disorder. People that do not have happy relationships or have trauma they can have a mood disorder. My data shows that environmental factors can affect youth's mood.

APPLICATION

The effects of mood disorders are important to learn, since these can be present in anyone's life. Maintaining mental health is essential for one's life, and learning about mood disorders as well as other disorders can help identify and prevent serious mental illnesses.

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- Saema Saad (my mother) MBA in Human Resources

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