

## Chapter 3

**30.**The difference between genotype and phenotype has to do with an individual's genetic makeup that they get from both of their parents versus what is shown physically as their genetic makeup due to influences from the environment. Genotype is the actual genetic makeup that a person gets from their parents as they begin to form from a fetus. The different genetic makeup that comes from each individual parent create the genotype. The phenotype is the actual physical attributes that a person may get from either their mother or father for example hair texture, skin color, height and even body shape.

**32.**The two types of research studies often used by behavioral genetics you identical twins versus people who were adopted. In the research with identical twins who come from an egg that split after being fertilized having similar DNA and genetic makeup to evaluate the similarities and the differences and how one environment can affect a person's phenotype based off of their genetic makeup.

In the research with a person that was adopted placing a person in a particular environment to see how it may trigger a possible biological trait of mental illness. Within the research a person could be placed in a stable home versus an unstable home to monitor if the mental illness is at a higher or lower risk based on the environment a person is raised in.

**33.**The relationship between chromosomes, DNA, and genes, is what makes up the genetic traits of a person. Each person has chromosomes that is made-up in their DNA that makes up the genes that each person carries. A person's DNA, genes and chromosome is what makes up the individual traits of a person in regard to how they will look. A person's hair color height and even eye color is formulated through these genetic traits.

**38.**Corpus callosum it's in the middle of the left and right sides the brain. This is made-up of natural fibers that come together as a large collective consisting of millions of axons. the corpus callosum helps the two sides of the brain to communicate with one another. This sits in the middle of the left and right side that contributes to interaction between these two different sides of the brain. This allows the processing of information to be shared from one side to the other side.

**46.**The sickle cell gene does not benefit anyone in the United States due to the fact that malaria (which is one of the diseases that sickle cell fight against in Africa) is not very prevalent in the United States. Sickle cell Anemia is where the red blood cells may have some deformation in its shape. By this deformation in shape those who live in Africa where malaria is more present have a better chance of immunity versus those who do not have the sickle cell gene/trait. Being born with this trait/ gene pass down through one of the parents the sickle cell trait /gene can be very

helpful to other culture or people in different countries of the world with certain diseases. This may be considered a helpful internal barrier to catching certain diseases that affect others who do not have sickle cell anemia.