Genetic research methods

Health & Medicine



Twin studies are particularly suited to separate the environmental and genetic backgrounds of an abundance of traits such as intelligence, schizophrenia, and alcohol dependence (Winerman 2004). In trying to determine whether genetics plays a role in intelligence both intelligence quotient (IQ) test and MRI Scans. The brains of about ten identical twins and ten fraternal twins could be scanned. Since identical twins have identical genes, tests for correlation should show close to 100% for identical twins while tests for and fraternal twins would show correlation closer to 50% since they are not likely to have identical genes. In terms of schizophrenia, a number of identical twins are tested for the disease. If both identical twins carry the disease they are concordant. If they do not then they are discordant. The rate of concordance determines whether the disease is hereditary Schizophrenia. com (n. d.).

According to About. com (n. d.), in terms of alcoholism twin studies would compare the incidence of alcoholism of identical twins with that in fraternal twins. If there is any genetic component in the risk of alcoholism then identical twins with identical genes are be expected to show similar histories of either developing alcoholism or not developing alcoholism. Fraternal twins, on the other hand, who are genetically different individuals, are more likely to differ in their tendencies as it relates to alcoholism.