

# 'Sensitivity gene' predicts whether anxious children will benefit from CBT

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(Medical Xpress) -- Research funded by the Medical Research Council (MRC) has shown that a genetic marker, called Serotonin Transporter Promoter Polymorphism (5HTPP), can be used to predict whether a child suffering from anxiety disorder will benefit from cognitive behaviour therapy (CBT). This is the first time that genetic analysis has been used to assess whether a psychological treatment like CBT will work for children.

The research team, led by Dr Thalia Eley at the Institute of Psychiatry at King's College London, collected DNA from 359 [children](#) diagnosed with [anxiety](#) disorder, which affects around one in twenty children in the UK. Those found to have a shorter version of the 5HTPP [genetic marker](#) were 20 per cent more likely to respond to CBT and to be free of their anxiety six months after the end of their treatment.

Two forms of the 5HTPP gene commonly exist within the human population; a short form and a long form. The short form has previously been shown to predict which individuals are likely to be prone to depression when under stress. More recently it has been proposed that the short form influences how individuals respond to their environment more generally, be it positive or negative. In this study children with the short form of the gene were more responsive to the positive environment of CBT, and were more likely to get better.

Dr Thalia Eley from the Institute of Psychiatry at King's College London says:

“Childhood anxiety is beginning to be recognised as a serious health problem. Many children with severe anxiety end up missing school and losing out on normal opportunities, not just in school but socially. CBT has been shown to help individuals think about the world around them and to experience their environment in a more health, positive way and hopefully stem the impact of anxiety before it gets worse in adulthood.

“Our study showed that having a short form of the gene, which can contribute to a child feeling more negative when things are stressful, may have a positive flipside, in that they are more responsive to the positive messages taught in CBT.”

Professor Chris Kennard, chair of the MRC Neurosciences and Mental Health Board that funded the research, says:

“Studies exploring whether [genetic analysis](#) might be helpful in deciding whether a drug treatment will or will not work have exploded over the last ten years. What is fascinating about this study is that this is the first time that a gene has been used to determine whether a [psychological treatment](#) is likely to have a therapeutic effect. The Medical Research Council is committed to funding research that will lead to better, more effective treatments for patients and hopefully this research will lead to a more tailored approach for treating anxiety.”

**More information:** Original Research paper: Therapygenetics: predicting response to psychological therapy from a genetic marker is published in Molecular Psychiatry

Provided by Medical Research Council

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