

Genetic study suggests more sensitive people respond better to couple's therapy

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How well someone responds to couple's therapy could be determined by their genes, according to a new study led by Queen Mary University of London and Denver University.

The well-established 'Prevention and Relationship Education Program' (PREP) has been shown to improve [communication skills](#) and the quality of relationships as well as prevent divorce among married couples. However, the effects of PREP can be inconsistent with some people benefiting more than others.

Previous studies have shown that [individual differences](#) in [sensitivity](#) can impact on people's responses to positive and negative experiences including psychological therapies. Therefore, the researchers set out to explore whether differences in an individual's sensitivity could explain the varying responses observed with the program.

As [almost half of the differences in peoples' sensitivity can be explained by genetic factors](#) the research team collected DNA from over 150 US couples taking part in PREP to explore if genes known to be associated with sensitivity impacted on an individual's response to the program. They found that those individuals that were more genetically sensitive, benefitted more from this type of therapy.

Couples completed questionnaires to assess communication, bonding, marital satisfaction, and likelihood of divorce both before and after treatment, and then at six-month intervals over a two-year follow-up period. The researchers found that an individual's genetic sensitivity had more impact in the years following treatment than in the short-term. As PREP is a skills-based therapy, the researchers suggest that this result could reflect the time taken for individuals to adopt new skills.

The researchers assessed an individual's genetic sensitivity using two different measures, one based on looking at a small number of known genes related to sensitivity, and another that used genome-wide data with thousands of genetic variations. Whilst both approaches showed that people's responses to PREP depended on their genetic make-up, the results suggest that genetic sensitivity was best captured using the broad,

genome-wide approach. Importantly, these findings were replicated in an independent sample included in the study.

Surprisingly, the researchers found that individuals with low genetic sensitivity who did not take part in the program showed similar positive responses in relation to marital satisfaction over time as individuals with higher sensitivity who were involved in the program. These findings suggest that whilst individuals with low sensitivity don't respond as well to treatment, in general they could be less vulnerable to typical relationship stressors experienced by couples.

Professor Michael Pluess, Professor of Developmental Psychology at Queen Mary University of London, said: "Our findings show that an individual's genetic make-up can influence how they respond to couple's therapy. As we know that not everyone who takes part in relationship programs like PREP benefits in the same way, in future it could be helpful to identify people with low sensitivity, that might benefit less from these standard treatments, and potentially offer them an alternative."

"Whilst in this study we've used genetic data to determine an individual's sensitivity, this is not the only way to do this as an individual's sensitivity is also influenced by environmental factors. It may be more practical to use sensitivity questionnaires that can be quickly and easily completed to capture these differences."

A free online sensitivity test is available on the website www.sensitivityresearch.com, which is run by some of the authors of the study.

More information: Genetic Sensitivity Predicts Long-Term Psychological Benefits of a Relationship Education Program for Married Couples, *Journal of Consulting and Clinical Psychology* (2022). [DOI:](#)

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