Your genes could impact the quality of your marriage

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The quality of your marriage could be affected by your genes, according to new research conducted at Binghamton University, State University of New York.

A research team led by Binghamton University Associate Professor of Psychology Richard Mattson evaluated whether different genotypes (i.e., possible genetic combinations) of the Oxytocin Receptor gene (OXTR) influenced how spouses support one another, which is a key determinant of overall marital quality. OXTR was targeted because it is related to the regulation and release of oxytocin, which is a hormone associated with feeling love and attachment. Oxytocin also appears to be relevant to social cognition and a wide range of social behavior.

"Prior research has hinted that marital quality is, at least partially, impacted by genetic factors, and that oxytocin may be relevant to social support—a critical aspect of intimate partnerships," said Mattson. "However, we are the first to provide evidence that variation on specific genes related to oxytocin functioning impact overall marital quality, in part, because they are relevant to how partners provide and receive support from each other."

The research team, which included Binghamton's Matthew D. Johnson and Nicole Cameron, recruited 79 couples. Each partner was asked individually to come up with an issue to discuss involving something they identify as their most salient personal problem that was not related to their partner or partner's family (e.g., problems at work). The selected topics were discussed for 10 minutes, recorded, and later coded for how support was provided and received by each partner. Couples were also asked to separately respond to several questionnaires, including the index of perceived quality of support during the prior interaction, and saliva samples for genotyping were taken at the end of the study session.

The team's findings highlight that particular genes may impact marital quality by influencing important relational processes, but that context shapes when particular genotypes are more or less beneficial to the marriage.

"We found that variation at two particular locations on OXTR impacted the observed behaviors of both husbands and wives, and that differences in behavior across couples had small but cumulative effects on overall evaluations of support, and thus marital quality in general," said Mattson. "However, what emerged as most relevant to overall marital quality for both partners was genotypic variation among husbands at a specific location on OXTR. Husbands with a particular genotype, which other researchers associated with signs of social deficits, were less satisfied with the support they were provided. Being less satisfied with the support they got from their wives was also associated with being less satisfied with their marriage.

The researchers hope their findings provide the foundation for replication and additional study of OXTR as an enduring determinant of marital functioning, as well as encourage research more broadly evaluating the role of genetic factors in interpersonal processes important to overall marital

quality.

"Genes matter when it comes to the quality of marriage, because genes are relevant to who we are as individuals, and characteristics of the individual can impact the marriage," said Mattson. "Our findings were the first to describe a set of genetic and behavioral mechanisms for one possible route of the genetic influence on marriage. In addition, we added to the increasing awareness that the expression of genotypic variation differs greatly depending on context."

The paper, "Oxytocin Receptor Gene (OXTR) Links to Marital Quality via Social Support Behavior and Perceived Partner Responsiveness," was published in the *Journal of Family Psychology*.

More information: Richard E. Mattson et al, Oxytocin receptor gene (OXTR) links to marital quality via social support behavior and perceived partner responsiveness., *Journal of Family Psychology* (2018). DOI: 10.1037/fam0000474