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TITLE: Would you like to know? The relationship between aversion towards ambiguity and extreme worry about finding out your own genetic predisposition for mental health problems.

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ABSTRACT:

Learning about our own and others' genetic predisposition for health conditions can have significant impact on someone's life. The public is already learning about their predisposition for hundreds of complex traits via direct-to-consumer genetic testing, but their ability to understand and cope with such information is a contentious issue.

We surveyed over 5,000 individuals in Australia, UK, and US, on their beliefs about genetic predisposition for alcohol dependence, schizophrenia, and depression, genetic literacy, and several psychosocial variables. We assessed 'extreme worry' about genetics, which involves: i) only wanting to know about genetic risk if there is something that can be done about the condition, ii) worrying about not being able to cope with the information, iii) not wanting to have children if they had a high genetic predisposition, and iv) not wanting to choose a partner who had a high genetic predisposition for the condition.

Across all samples and traits, the strongest predictor for extreme worry is ‘need for closure’, an individual’s desire for firm answers and aversion towards uncertainty. Need for closure emerges as key for understanding how people make sense of complex issues, however little is known about its development across the lifespan, its genetic correlates, or its role in counseling. Using a twin design, we estimated genetic and environmental contributions to the phenotype (VA=37.6% [26.0–47.8], VE=62.4% [52.2–74.0]). There was no evidence of moderation of variance components by age or polygenic scores for educational attainment. Detailed results and implications for communication about genetics will be discussed.

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