



# media release

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## **Look to family history to help predict severity of mental disease**

People are routinely asked by doctors about their family history of medical problems such as cancer, diabetes, and heart disease. But up until now, this has not been the case for mental illnesses.

New findings by an international group including University of Otago researchers make a strong case for changing current practice. They report that a short question-and-answer session about a person's relatives and their symptoms of depression, anxiety, or substance abuse is enough to predict not only whether the interviewee is at greater risk for developing each disorder, but also how severe that future illness is likely to be.

The findings come from the Dunedin Multidisciplinary Health and Development Study, which has followed 1000 people born at Queen Mary Hospital in Dunedin in 1972-73 from birth through to age 32. The researchers have been tracking the physical and mental health and lifestyles of study members since they were three years old.

"We already knew that mental illnesses tend to run in families, and are among the most heritable of all disorders," says Professor Richie Poulton, Director of the Dunedin Study and one of the research authors, "what we didn't know was how closely family history was linked to the seriousness of mental illnesses, and that's what this study has helped us find out."

The research team tested each individual's experience with depression, anxiety, alcohol dependence and drug dependence in relation to their family history "scores" – the proportion of their grandparents, parents and siblings over age 10 who were affected. Their analysis shows that family history can predict a more recurrent course of each of the four disorders. It is also indicative of those more likely to suffer a worse impairment and to make greater use of mental health services.

Family history could therefore be used to identify those in need of early intervention or more aggressive treatment for mental illnesses.

For various reasons, however, family histories have not been used in the diagnosis of mental illnesses before now. Professor Terrie Moffitt of the Duke Institute for Genome Sciences and Policy, a co-author of the research, says that health professionals have tended to avoid questioning people about their family history of mental illnesses because of the stigma attached to them.

“There’s a sense that families are not as open about mental disorders,” Professor Moffitt says.

A second reason is that the “bible” of psychiatry, the Diagnostic and Statistical Manual of Mental Disorders (DSM), makes no mention of family health history. Professor Moffitt and other experts are currently in the process of revising the current version of the DSM, so future editions may well include family health history as an important part of screening for mental illnesses.

Funding for the study came from the New Zealand Health Research Council, US National Institutes of Mental Health, UK Medical Research Council, and the William T Grant Foundation (USA). Coauthors on the study include Barry Milne, Terrie Moffitt, Avshalom Caspi, HonaLee Harrington, and Michael Rutter.

The report appears in the July issue of *Archives of General Psychiatry*. A factsheet is included below.

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**FACTSHEET**

*Predictive value of family history on severity of illness: the case for depression, anxiety, alcohol dependence, and drug dependence*

**PUBLICATION SOURCE:**

Archives of General Psychiatry

**THE FINDINGS:**

We found that among sufferers of depression, anxiety, alcohol dependence and drug dependence, having a family history of disorder increased the chances of having a more recurrent course of each of the four disorders. Family history was also indicative of those more likely to suffer worse impairment and to make greater use of mental health services.

## **THE STUDY:**

These findings come from the Dunedin Multidisciplinary Health and Development Study. The study has followed a group of 1000 children, who were born in 1972-73 in Dunedin, New Zealand, from birth to age 32 years. They will next be followed up at age 38, beginning in June 2010.

## **WHY ARE THE FINDINGS IMPORTANT?**

Psychiatric family history is important too. Family history of physical health disorders, such as heart disease, diabetes and cancer, is routinely collected by doctors. Family history of mental health disorders, such as depression, anxiety and substance dependence, is not. Findings from this study suggest that collecting family history information about mental health problems would allow doctors to find out not only who is at increased risk of having a mental health problem, but also whose mental health problem is likely to be long-lasting and debilitating. Thus, the treatment and early detection of mental health disorders would be improved by adding questions about family history of mental health disorders to the list of disorders routinely asked about by doctors.

Who is most in need of treatment? Most people who experience mental health disorders do so temporarily, and are likely to get better without the need for treatment. Only a minority will have serious or long-lasting disorder in need of treatment. Family history is a quick and cheap way to sort these groups out. Patients who present with a mental health problem and who also have a number of relatives affected by the same mental health problem are strong candidates for needing treatment; those with a family free of mental health problems are far more likely to get better on their own accord.

Mental health professionals follow the Diagnostic and Statistical Manual of the American Psychiatric Association (known as DSM-IV) when making diagnoses of mental disorders. The purpose of the DSM-IV diagnosis is to predict a patient's future prognosis, and to identify which patients are most in need of scarce mental health treatment resources. Our findings suggest that family history can predict prognosis and identify treatment need. Yet, family history information is not included in the diagnostic criteria for mental disorders in the current edition of the DSM-IV. DSM-V is now being prepared, and family history is under consideration.

The hunt for genes. Researchers looking to find the genes responsible for mental disorders have often selected early-onset cases in the belief that such cases have a more familial or genetic form of disorder. However, we found that family history was not predictive of the age at which mental health disorders developed. Findings from this study suggest that researchers would be better off selecting people with a recurrent disorder or a disorder that results in high levels of impairment, or, better still, collecting family history information directly.

## **SUPPORTING DETAILS:**

How we measured family history. This study used family histories for 1000 32-year old adults, reported in approximately 3000 interviews with the adults and their parents. Those interviews covered 8 members per family on average, or 8000 assessments in total.

The family members' mental health was reported by three 'informants': the respondent and both of their parents. Two out of the three informants had to agree for a family member to be considered to have a disorder.

Family history scores were calculated for four disorders as the proportion of the respondent's family members (grandparents, parents and siblings) who had experienced each disorder. The four disorders studied were depression, anxiety, alcohol dependence and drug dependence.

How we measured severity of illness. The past-year experiences of a variety of mental health disorders were assessed by means of a structured clinical interview repeated at several times during the respondents' lives.<sup>1</sup> Depression (major depressive episode) and anxiety (generalised anxiety, panic, agoraphobia, specific and simple phobia, obsessive compulsive disorder and post-traumatic stress disorder) were assessed at ages 11, 13, 15, 18, 21, 26 and 32. Alcohol dependence and drug dependence were assessed at ages 18, 21, 26 and 32. *Recurrence* was assessed for each disorder as the number of ages at which the respondent met diagnostic criteria for disorder. *Impairment* was assessed for each disorder as the *maximum* impairment reported at any age (on a 5 point scale from 1, very little to 5, very much). *Mental health service use* was assessed for each disorder as whether or not respondents had between the ages of 20 and 32 (i) received treatment for disorder, or (ii) received medication or been hospitalised for disorder. *Age of onset* was assessed for each disorder as the youngest age at which respondents met diagnostic criteria for disorder.

### **LIMITATIONS OF THE STUDY:**

Our inability to find associations between family history and the age at which mental health disorders developed may have been due to the young age of the sample. That is, because the members of the sample were all aged 32 at the most recent assessment, many may be yet to develop mental health disorders, and it may be too early to detect age-of-onset associations. However, it should be noted that a number of researchers have found associations between family history and the age at which mental health disorders developed across the age range we studied<sup>2</sup>.

We do not know whether these findings will generalize to all ethnic groups.

### **AUTHORS:**

Barry Milne, Avshalom Caspi, HonaLee Harrington, Richie Poulton, Michael Rutter, Terrie Moffitt.

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<sup>1</sup> The *Diagnostic Interview Schedule for Children (DISC)* at younger ages (11, 13 and 15), and the *Diagnostic Interview Schedule* at older ages (18, 21, 26 and 32). *DISC*: Costello A, Edelbrock C, Kalas R, Kessler M, Klaric S. 1982. *Diagnostic Interview Schedule for Children (DISC)*.

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<sup>2</sup> E.g., Lieb R, Isensee B, Hofler M, Wittchen H-U. 2002. Parental depression and depression in offspring: evidence for familial characteristics and subtypes? *Journal of Psychiatric Research*, 36, 237-46.

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