Research Brief

A SUMMARY OF A PUBLISHED ARTICLE

Mood and Anxiety Disorders in Females with the FMR1 Premutation

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FINDINGS FROM FAMILY ADAPTATION TO FXS, A STUDY CONDUCTED AT THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL

Recent reviews suggest that mothers of children with disabilities often display increased symptoms of depression or anxiety. There may be multiple reasons for these relationships. First, mothers of children with disabilities may experience stressors that are associated with having a child with a disability placing them at increased risk for poor adaptation. There may also be biological components contributing to their depression and anxiety.

Researchers have speculated that there may be a genetic link to mood or anxiety disorders in women with the FMR1 premutation with some work indicating that mood and anxiety disorders may be associated with CGG repeat length. In addition to genetic factors, mothers with the FMR1 premutation may experience specific stressors associated with raising a child with a disability, placing them at increased risk for mood and anxiety disorders. Researchers may be able to identify potential risk factors (e.g., genetic variables and parenting stressors) that place mothers with the FMR1 premutation at an increased risk to develop mood and anxiety disorders which could lead to the development of prevention and intervention programs.

Researchers in this study focused on mothers with the FMR1 premutation, as the rate and cause of the depression and anxiety in this population are unclear. The purposes of the study were to: (1) identify the frequency of mood and anxiety disorders (current and lifetime) in mothers with the FMR1 premutation, (2) examine demographic variables that may be associated with mood and anxiety disorders,(3) identify what stressors mothers with the FMR1 premutation associate with the occurrence of major depressive disorder, and (4) examine treatments that mothers with the FMR1 premutation received to address symptoms

Ninety-three females (aged 20 to 46) with the FMR1 premutation and at least one child with full mutation FXS took part in the study. In order to assess mood and anxiety disorders, women in this sample were given the Structured Clinical Interview for DSM-IV Disorders (SCID-I), a semi-structured interview that is used to diagnose clinical disorders (e.g. depression and anxiety disorders). Participants in the study were asked to complete a range of measures to assess child behavior problems and to understand demographic information. The data from this sample were compared to data from the National Comorbidity Survey Replication (NCS-R), which is a nationally representative household survey of mental health disorders.

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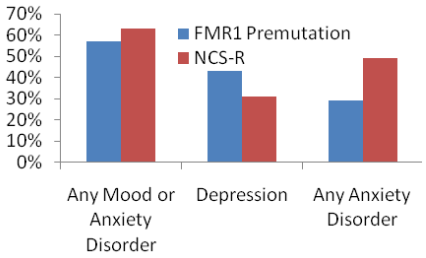
Depression

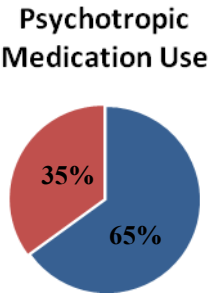


Based on the results, 43% of women met criteria for depression at some point in their lifetime with 4% reporting a depressive episode occurring within a month of the interview. Out of those mothers who met for depression, the majority (62%) had a single episode of depression which is different from community rates which reflect that depression tends to be recurrent and often constant. Unlike other studies that indicated that higher CGG repeats were related to more psychological symptoms, we found that higher CGG repeat length was associated with less likelihood for depression; however, this effect may not be linear meaning that women with intermediate CGG repeat lengths might be at higher risk than those with lower or higher (>100) repeats. In addition to CGG repeat length predicting depression in our sample, we found that women who were never married were at increased risk for depression. However, child variables, such as problem behaviors and the number of children affected with FXS, were not associated with depression in mothers with the FMR1 premutation. In fact, only 11% of major depressive episodes were associated with challenges of raising a child with FXS, which suggests that depression in mothers with the FMR1 premutation is not fully explained by the stress of raising a child with a disability. Women at greatest risk for depression may have a combination of multiple risk factors, including genetic factors, sociodemographic stressors (e.g. never been married), or the absence of protective factors (e.g. social support networks).

Anxiety

We found that 29% of women with the FMR1 premutation met criteria for an anxiety disorder. The most common anxiety disorders were social phobia (8%) and panic disorder without agoraphobia (9%). Our community data indicate that anxiety disorders are common in many women and rates in FX were only higher for panic disorder without agoraphobia and were actually lower for social phobia, post-traumatic stress, and specific phobia. Unlike depression, anxiety disorders were not associated with genetic or demographic variables but were strongly related to child variables including child problem behavior and the number of children affected with FXS in the home.

Treatment



Regardless of meeting criteria for anxiety or depression, 31% of the mothers with the FMR1 premutation report seeking professional help for feelings of depression or anxiety. Psychotropic medication was reported by 35% of the women in our sample in the year prior to the interview and likely more have used medication at one point in their life. Anti-depressants were the most common medication used.

More research on mood and anxiety disorders in females with the FMR1 premutation is needed to better understand and identify psychological effects of FXS, which may lead to improved identification of risk factors and treatment. In addition, identifying predictors of onset and recurrence of depression and anxiety disorders in this population may be beneficial as it may lead to greater support and allocation of resources.

This research summary is based on the following published article: Roberts JE, Bailey DB, Mankowski J, Ford AF, Weisenfeld LA, Heath M, Golden RN. Mood and anxiety disorders in females with the FMR1 premutation. American Journal of Medical Genetics, Part B: Neuropsychiatric Genetics. 2009 Jan; 150B (1):130-9. this summary was prepared by the Fragile X Research Registry. If you have any questions or would like to contact the researchers of this study, please send an email to info@FragileXRegistry.org.