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CO-OCCURRING DIAGNOSES AMONG *FMR1* PREMUTATION ALLELE CARRIERS

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Following the discovery of two disorders associated with premutation alleles of the fragile X mental retardation gene (*FMR1*), primary ovarian insufficiency (FXPOI) and a tremor/ataxia syndrome (FXTAS), numerous studies have examined other potential co-morbid conditions, including neuropsychological deficits. Here, the frequency of self-reported diagnoses obtained through medical history interviews from *FMR1* premutation carriers and non-carriers ages 18 to 50 were analyzed. Study subjects included 525 women, 326 of whom carry the premutation, and 143 men, 36 of whom carry the premutation. Men with the premutation did not report any medical conditions at higher rates compared with non-carriers, controlling for age, ethnicity/race, and household income. Women with the premutation reported mental health disorders (i.e., ADHD, anxiety and depression) more often than non-carriers. However, after adjusting for covariates, these increased rates were not statistically significant. Additional follow-up analyses examined the consequence of ovarian dysfunction as a cause of co-occurring conditions. Women with an indication of ovarian insufficiency (i.e., irregular cycles) reported more thyroid problems, depression/anxiety, and gastrointestinal problems. Since only women, not men, reported these conditions more often, the relationship between FXPOI and hormone irregularities in women should be explored for a potential link with the increase in the reported medical conditions.