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NXFX 13th International Fragile X Conference, Miami

Saturday 28th July 2012

Agenda:

1. Rate of ADHD in FXS sample
2. Comorbid conditions in sample
3. ADHD conceptualization for diagnosis
4. Clinical practice implications

Fragile X Sample:

- Masters of Psychology (clinical psychology) University ethics committee approval granted

Participants

- Fragile X Syndrome; N= 114; PM or FM
- Retrospective de-identified data -between the years of 1998 and July 2011 (~13 years)
- Prior consent for inclusion as study data & one+ DSM-IV TR AD/HD checklist completed

Demographics:

- Age range 2 to 56 years, *m*= 15.28 (*SD* = 13.12)
- More Males 71.1 % than females 28.9%
- 86% Full mutation expansion (64%males)
- 75% children and adolescents (46% below 10 yrs)

Delay status: (None, Mild, Severe)

- Table 1: age group by mutation status & Age

1st: ADHD rate: Overall rate of ADHD

- DSM-IV-TR ADHD Checklist
- 62% of FXS sample have 'case' of ADHD
- 78 to 81% had notable traits ('at-risk' or case+) of AD/HD
- Significant relationships:
- Outside witness report= No significant difference by sex
- Parent report: Sig. sex diff for Hyperactive-Impulsive. The females were rated lower than males Effect size moderate.
- No significant relationship between delay status and AD/HD ratings

ADHD in Sample:

- Overall by sex & age group: high rates overall ADHD reported (52-70%)
- Inattentive ratings by Sex & Age Group: high rates of inattention reported (47-70%)
- Hyperactivity/Impulsivity by sex & Age Group: Parents report higher rates in children (57%) than adults (22%), yet Outside witness reports higher rates in adults (53%) than children (41%)

2nd: Comorbid mental health conditions

- **Age group:**
- Positively correlated with both anxiety and mood disturbance

- Not significantly related to Autism spectrum disorder
- **Sex:**
- No significant relationship
- **'Other conditions':**
- Relatively common (26.3%)
    - including health problems (n = 8, e.g., asthma, diabetes and high blood pressure);
    - problems with aggression,
    - behaviours (eg., tantrums or outbursts),
    - mood instability (n = 17),
    - and epilepsy (n = 5), although these are not all mental health conditions,
    - **many required medication for management

3rd: ADHD criteria conceptualization

- Current DSM-IV-TR AD/HD criteria A list of symptoms congregate into two primary cohesive factors
- FXS sample: A principal component analysis (PCA) completed (using SPSS V.19).
- The parent DSM-IV TR report data explored with a PCA and suitability was assessed as positive. The outside witness data achieved similar suitability results.
- An exploratory factor analysis, two-component solution, with oblimin rotation was then conducted. Tables show the factor loadings for both the parent and outside witness ratings of the DSM-IV TR Criteria- A components.
- Parent Exploratory factor analysis: all criteria load on one factor with minimal load on second factor
- Outside Witness Exploratory factor analysis: similar single factor loading

Of Note:

- The AD/HD DSM-IV TR criteria are applicable to this FXS -developmentally disabled population
- A single factor model appears to apply to this sample.
- A "general 'g' factor" posited by Martel, Von Eye, and Nigg (2010, p.906) via a "bi-factor model" of AD/HD
    - All criteria symptoms load as an overall risk
    - Secondly "specific factor components" (Inatt or Hyp/ Imp) suggest individual presentation.
- Best 'fit' for clinical practice in this FXS sample- appears so….
- Facilitates the different etiological processes, differential assessment, and tailoring of treatment to individual profiles.

Future clinical practice: Clinicians need to:

- Aware of high rates of ADHD across all ages
- Aware of high rates of anxiety & mood disturbance
- Conceptualize ADHD criteria as indicative of risk, and possible need for interventions

Thank You for Listening.