Absence of Gender Differences in Co-occurring Internalizing and Externalizing Disorders in Youth: A Network Conceptualization

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Introduction

- Why do we need to continue to study comorbidity in youth?
  - Problems with excluding comorbidity in research (Caron & Rutter, 1991)
    - Can form misleading conclusions
    - Not practical in that this would result in an atypical sample
  - Statistics (Caron & Rutter, 1991)
    - Epidemiological surveys often show that comorbidity rates are more than double than what is expected by chance
    - Clinic samples tend to show disproportionately higher referral rates for combined disorders compared to single disorders
Introduction

Definition of Comorbidity:
- Two or more existing mental disorders present at the same time (Borsboom et al., 2011)

Implications from comorbidity:
- Suggests that both disorders are linked by the time in which it is present (Kaplan et al., 2006)
- Not clear what type of relationship disorders have with one another (Kaplan et al., 2006)
- Shift from categorical to dimensional model (Widlger & Mullins-Sweatt, 1997)
Introduction

- **Characteristics:** internalizing disorders vs. externalizing disorders
  - Females are more likely to exhibit internalizing disorders than males while males are more likely to exhibit externalizing disorders than females (Nottlemann & Jensen, 1995)

- **Purpose/Goals:**
  - Understand the nature of comorbidity by examining the co-occurrence of internalizing and externalizing disorders across genders
  - Provide/support a conceptual approach for comorbidity in assessing and treating children/adolescents with multiple diagnoses using the Network Model
Method

Sample
- 280 youth referred to a psychopharmacology clinic and evaluated for psychopathology
- 78 girls (28%)
- 202 boys (72%)
- Range – 3-18 years (M = 10.5; SD = 3.4)

Measure
- Schedule for Affective Disorders and Schizophrenia for School Age Children (K-SADS)
Results

- **Internalizing disorders = 81.4%**
  - Girls (89.7%) more likely than boys (78.2%)
    - $X^2 (1, N = 280) = 4.94, p < .05$

- **Externalizing disorders = 86.8%**
  - Boys (90.6%) more likely than girls (76.9%)
    - $X^2 (1, N = 280) = 9.17, p < .01$

- **Co-occurring = 69.3%**
  - No difference in gender: Girls (67.9%); Boys (69.8%)
    - $X^2 (1, N = 280) = 0.09, p = .763$
Although significant difference between genders, both genders had a high percentage of experiencing either an internalizing disorder or an externalizing disorder (75%+).

*No difference between genders for co-occurring internalizing and externalizing

Both girls (67.9%) and boys (69.8%) experience at least one internalizing and one externalizing disorder.

May be more clinically appropriate to recognize that a significant proportion of both females and males are experiencing at least one internalizing disorder and at least one externalizing disorder.
Questions Raised

- Classical Conceptualization – Latent Variables

- Why is the occurrence of both so prevalent?
A Novel Approach

- The Network Model (Cramer, Waldorp, van der Maas, & Borsboom, 2010; Borsboom, Cramer, Schmittmann, Epskamp, & Waldorp, 2011)

- Comorbidity is prevalent because disorders interact
Practical Application

- Work at the symptom level
  - Avoid the assumption that clusters of symptoms (disorders) yield the same information as the individual symptoms

- Make connections, and look for clusters
  - Borsboom et al. (2010) hypothesize that some symptoms are more central than others, which may have diagnostic and treatment ramifications

- Consider new hypotheses
  - Variation may exist at the symptom level
Our Expectations

Network Model Comorbidity Symptom Overlap in Children: Example

Irritability

- Often loses temper
- Often argues with others
- Easily annoyed
- Often angry & resentful

Insomnia

Fatigue

Anhedonia

Indecisiveness

Defiance

Major Depressive Episode

Oppositional Defiant Disorder
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