Chronicity of Mental Comorbidity in a Cohort of Children with New-onset Physical Illness

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Background & Rationale

- Mental comorbidity in children with physical illnesses (i.e., multimorbidity) is common with prevalence of 20-60% [1]
- Magnitudes of association across physical illnesses are similar, supports non-categorical approach [2,3]
- Lack of research on chronicity of child multimorbidity
- Information is needed to inform allocation of health care resources, health care planning, and coordination of services

Objectives

1. Investigate patterns of chronicity of mental comorbidity in children newly diagnosed with physical illness
2. Estimate proportion of homotypic continuity
3. Model child factors associated with multimorbidity

Data & Methods

- Prospective pilot study of N=50 children 6-16 years with new-onset physical illness recruited from two children's hospitals
- Parents completed telephone interviews and mailed surveys at baseline and six months
- Mental disorder: Mini International Neuropsychiatric Interview

Results

- 37% of children had no multimorbidity; 27% had acute multimorbidity; and, 37% had persistent multimorbidity
- No sociodemographic differences across groups (Table 1)
- Elevated behavioural symptoms among children with persistent multimorbidity (Figure 1)

Table 1 – Characteristics of Study Sample

	Not Multimorbid	Acute	Persistent
N	18 (37%)	13 (27%)	18 (37%)
Child			
Male	9 (50%)	6 (46%)	10 (56%)
Age	12.0 (2.6)	12.4 (2.6)	10.7 (3.5)
Severity	1.0 (1.0)	1.6 (1.1)	1.6 (1.4)
Parent			
Age	45.4 (6.2)	45.2 (4.3)	41.8 (5.1)
High SES	9 (50%)	10 (78%)	9 (50%)

References

1. Butler et al. BMJ Open 2018;8:e019011
2. Tegethoff et al. PLoS ONE 2016;11:e0165196
3. Stein & Silver. Arch Pediatr Adolesc Med 1999;153:68

Figure 1 – Distribution of Behavioural Symptoms

- Homotypic continuity was higher among externalizing disorders compared to internalizing disorders (Figure 2)

Figure 2 – Homotypic Continuity (Baseline to Six Months)

- All mental disorders showed significant associations with persistent multimorbidity in children (Table 2)

Table 2 – Factors Associated with Multimorbidity

OR (95% CI)	Acute	Persistent
MDD	0.98 (0.74, 1.30)	1.29 (1.01, 1.64)
SAD	0.80 (0.50, 1.27)	1.31 (0.98, 1.75)
SP	0.93 (0.64, 1.35)	1.32 (0.95, 1.82)
GAD	0.99 (0.77, 1.27)	1.33 (1.05, 1.70)
ADHD	1.49 (1.01, 2.20)	1.61 (1.11, 2.33)
ODD	1.13 (0.77, 1.66)	1.61 (1.10, 2.35)
CD	1.01 (0.34, 2.94)	1.97 (0.89, 4.37)

Adjusted for child age and household income.

Conclusions

- Mental comorbidity is common and persistent in children with new-onset physical illness
- Persistence is unrelated to the type of mental disorder