

Prevalence, stability, and concordance rates of gender identification symptoms: A longitudinal study in Dutch twins

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INTRODUCTION

According to the DSM-IV, gender identity disorder (GID) is characterized by a strong and persistent cross-gender identification and a persistent discomfort with one's own sex. Cross-gender interest typically starts at age 2-4 years. Aim of the present study is to explore the prevalence, stability during childhood, and the twin concordance rates of symptoms of gender identity.

METHOD

As part of an ongoing longitudinal study of the Netherlands Twin Registry (NTR), maternal CBCL reports were obtained at **age 7** (1220 mzm, 1220 dzm, 1396 mzf, 1147 dzf, 2299 dos), **age 10** (755 mzm, 681 dzm, 911 mzf, 652 dzf, 1408 dos), and **age 12** (428 mzm, 372 dzm, 493 mzf, 351 dzf, 697 dos).

Symptoms of GID were measured using 2 items of the CBCL:

- 'behaves like opposite sex'
- 'wishes to be of opposite sex'

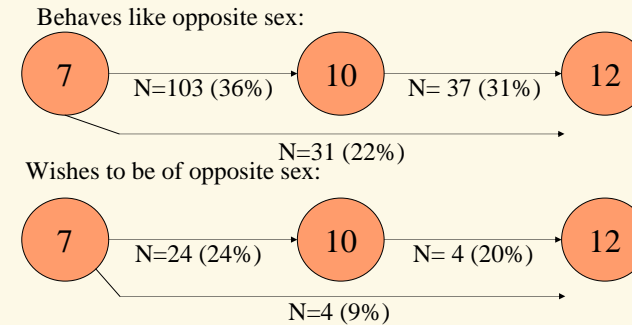
A child is affected when a item is rated with sometimes or frequently.

RESULTS

Prevalence

| | Behaves like opposite sex | | | Wishes to be of opposite sex | | |
|-------|---------------------------|------|------|------------------------------|------|------|
| Age | 7 | 10 | 12 | 7 | 10 | 12 |
| Boys | 3.2% | 2.3% | 0.6% | 0.9% | 1% | 0.5% |
| Girls | 5.2% | 3.3% | 1.6% | 1.7% | 0.8% | 0.3% |

Stability



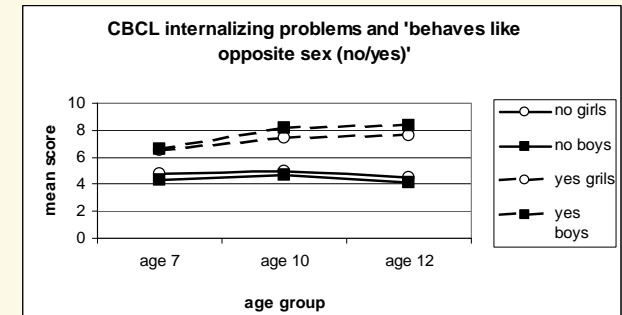
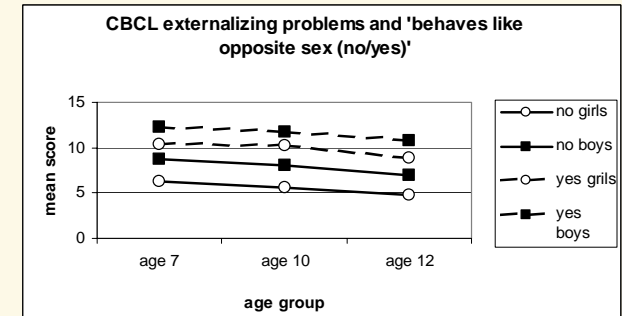
Pairwise concordance

| Age | Behaves like opposite sex | | | | | |
|-----|---------------------------|-----------|----|----------|----|----------|
| | 7 | | 10 | | 12 | |
| | C | D | C | D | C | D |
| MZM | 12 | 53 (23%) | 1 | 29 (3%) | 1 | 11 (9%) |
| DZM | 1 | 90 (1%) | 0 | 46 (0%) | 0 | 17 (0%) |
| MZF | 19 | 105 (18%) | 8 | 51 (16%) | 2 | 15 (13%) |
| DZF | 7 | 155 (4%) | 0 | 51 (0%) | 0 | 14 (0%) |
| DOS | 15 | 121 (12%) | 5 | 49 (10%) | 1 | 15 (7%) |

C = Number of concordant pairs; D = number of discordant pairs

The number of concordance pairs for item 'wishes to be of opposite sex' have maximally 2 pairs in the zygosity groups.

Relation with problem behaviors



DISCUSSION

Low prevalence of symptoms of GID at age 7 and the prevalence declines after age 7.

Girls have somewhat higher prevalence.

At age 7, the higher concordance rates for MZ than DZ may suggest genetic influences. However, the concordance rate was also higher in DOS twins.

Increased levels of problem behaviors for children who 'behaves like the opposite sex'.