

# CLASSROOM SEPARATION OF TWINS DURING PRIMARY SCHOOL

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## Background

In the Netherlands parents and teachers of 4-year-old twins have to decide whether to put the children into the same classroom or not. Since there is hardly any research comparing the adjustment of twins who are separated versus kept together at school, this decision is presently not evidence-based.

## Measures

- Social economic status at age 3
- Maternal ratings of problem behaviour (CBCL) at age 3, 7 and 12
- Teacher ratings of problem behaviour (TRF) at age 7 and 12
- Test for academic performance (CITO) at age 12

## Research questions

1. Are there pre-existing differences between separated and non-separated twins?
2. Are there any effects of separation on maternal and/ or teacher ratings and/ or academic performance?

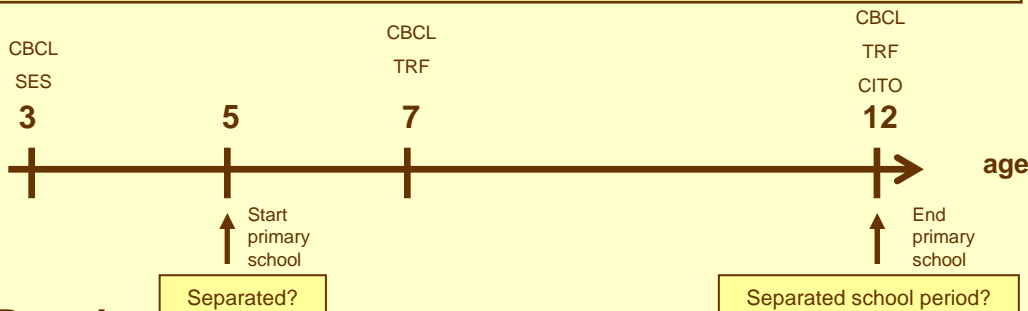
To address these questions a distinction was made between short-term effects measured at age 7 in twins separated at age 5 and long-term effects measured at age 12 in twins separated during the whole school period.

## Statistics

- To test for pre-existing differences logistic regression analysis was performed with SES and maternal CBCL at age 3 as predictors.
- To test the effect of separation on problem behaviour and academic performance a (M)ANOVA was performed with problem behaviour or academic performance as dependent variables. When appropriate a MANOVA for repeated measures was performed to correct for pre-existing problem behaviour at age 3. All dependent variables were corrected for SES

## Subjects

Subjects were randomly selected twins from twin pairs (healthy and not receiving special education) registered by the Netherlands Twin Registry. Short-term effects on CBCL ratings was measured in 7597 twins (TRF 5686), long-term effect on CBCL ratings were measured in 2184 twins (TRF 284, CITO 843).



## Results

Separation at age 5 was predicted by externalizing problem behaviour as measured by the mother at age 3,  $p < .01$ , and SES at age 3,  $p < .01$ . At age 7, separated twins had more internalizing and externalizing problems than non-separated twins, as rated by both mothers and teachers,  $p < .01$ . However, only for the maternal ratings of internalizing problems, these effects could be attributed to the separation itself, instead of to pre-existing problems at age 3,  $p < .01$ . At age 12, there were differences in problem behaviour, but again these could be explained by pre-existing differences. There were no differences in academic achievement between separated and non-separated twins.

## Conclusion

The decision to separate twins when they enter primary school is probably based in part on existing behavioural problems and is associated with SES. In the short run, separation seems to lead to more internalizing problems. In the long run, separation does not affect problem behaviour or academic achievement. The results were similar for MZ and DZ twins.