GENETIC ANALYSES OF DSM-IV ORIENTED PROBLEMSCALES IN 3-YEAR OLD DUTCH TWINS AS A FUNCTION OF SOCIO-ECONOMIC STATUS

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INTRODUCTION

To study the interaction between genes and socio-economis status (SES) for problem behavior in preschool children, we collected CBCL data of 6718 3-year old Dutch twin pairs. Mother's ratings of the problem behavior of the children were used to obtain five DSM-IV oriented problem scales: affective and anxious problems, oppositional and overactive behavior and pervasive developmental problems (Achenbach, 2000).

METHODS

All twin pairs were divided in three socio-economic (SES) groups: low, middle and high. We calculated the correlations from MZ and DZ twins for the five problem scales per ses group and used Mx to test if genetic and environmental factors of problem behavior varied across SES.
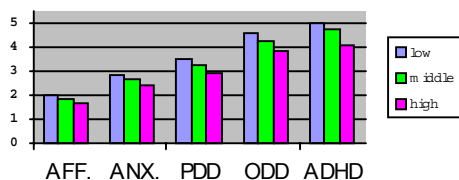
Frequency of twin pairs for each SES-group

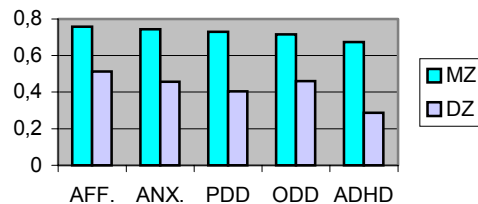|	N	% low	% middle	% high
MZM	1061	18	50	32
DZM	1026	19	46	35
MZF	1217	18	48	34
DZF	967	20	49	31
DOS	2162	20	45	35
total	6433	19	47	34

RESULTS

Means

Means of problem behavior were higher in the low ses groups. The effect sizes however were very small (max. 1%).

Means per SES group for each problem behavior

Twin correlations

MZ correlations almost double the DZ correlations which indicated for high genetic influence for all problem behaviors.

DZ and MZ twin correlations for each problem behavior

Twincorrelations per SES group

Only for affective behavior the twin correlations seem to differ among the SES groups. Shared environment seemed more important in the low SES group.

Twin correlations per SES group

SES-->	MZ			DZ		
	low	middle	high	low	middle	high
aff.	0.81	0.74	0.71	**0.59**	**0.52**	**0.44**
anx.	0.76	0.77	0.69	0.47	0.46	0.43
perv.	0.77	0.71	0.72	0.41	0.41	0.38
opp.	0.70	0.71	0.72	0.49	0.44	0.45
ov.	0.64	0.67	0.69	0.23	0.29	0.28

Model fitting results

Genetic analyses in Mx indicated no interaction with SES for the DSM-IV oriented problem behaviors. For affective behavior and anxious behavior scalar models were the best fitting models.

CONCLUSIONS

*There is a strong indication for high heretability for each DSM-IV oriented problem behavior.
*There is no indication that the influences of genes and environment were different among the SES groups.