

# Genes, family environment, and gene-family environment interactions as predictors of adolescent alcohol use

Published: 03-07-2006

Last updated: 14-05-2024

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<b>Ethical review</b>	Approved WMO
<b>Status</b>	Pending
<b>Health condition type</b>	Other condition
<b>Study type</b>	Observational non invasive

## Summary

### ID

NL-OMON30084

### Source

ToetsingOnline

### Brief title

genes and alcohol

### Condition

- Other condition
- Family issues

### Synonym

alcohol use

### Health condition

alcohol gebruik

### Research involving

Human

## Sponsors and support

**Primary sponsor:** Katholieke Universiteit Nijmegen

**Source(s) of monetary or material Support:** NWO Open Competitie

## Intervention

**Keyword:** alcohol use, family influences, gene-environment interaction, genes

## Outcome measures

### Primary outcome

The outcome variables are:

- . frequency of alcohol use
- . level of alcohol use (number of glasses)
- . frequency of drunkenness
- . problem drinking

The independent variables include:

- . the presence of particular polymorphisms
- . general parenting (warmth, control)
- . alcohol specific parenting (rules, control, communication)
- . alcohol use of parents and grandparents
- . general and alcohol specific differential parenting
- . individual child- and parent characteristics (e.g., personality, psychopathology)

### Secondary outcome

The study will not have secondary study parameters.

# Study description

## Background summary

Alcohol use among adolescents presents a large risk factor because it is related to problem drinking and alcoholism later in life. Furthermore, recent studies have revealed an alarming trend in alcohol use among Dutch adolescents. It is therefore absolutely necessary to describe the determinants of adolescent alcohol use. Research has shown that family influences can be important predictors for alcohol consumption, while genetic research shows that particular polymorphisms could play a role in different aspects of alcohol use. The problem of current research is that it has had a too narrow focus because it either examined environmental factors or genetic factors, although it has been widely acknowledged by now that primarily the interaction between environment and genes that is predictive of behavior. As far as we know, the project will be the first in the Netherlands that focuses explicitly on the interaction between family environment and certain polymorphisms in predicting various aspects of adolescent alcohol use (experimenting, regular drinking, drunkenness, problem drinking).

Six research questions will be answered: 1) are the polymorphisms that we examine differentially related to different aspects of alcohol use; 2) can general parenting and alcohol-specific parenting predict different trajectories of adolescent alcohol use; 3) to what extent does adolescent alcohol use predict parenting; 4) how do particular polymorphisms interact with general parenting in predicting adolescent alcohol use; 5) how do particular polymorphisms interact with alcohol-specific parenting in predicting adolescent alcohol use; 6) to what extent do particular polymorphisms interact with differential parental treatment in predicting adolescent alcohol use.

## Study objective

The aim of the study is to describe to what extent the interaction between family environment and specific polymorphisms can predict various aspects of alcohol use (experimenting, regular drinking, problem drinking, drunkenness) among adolescents aged 13 to 20.

## Study design

The project is a continuation of ongoing project that included three measurement waves (2002/2003, 2003/2004, en 2004/2005), with a period of one year in between. During each wave, all four family members filled out questionnaires.

In the present project, all families will be asked to participate in three new data assessment waves, which will take place in 2006, 2007, and 2008.

Participation means that each participant will fill out a questionnaire during each wave. In addition, from each participant a small sample of genetic material (saliva) will be collected in small orogenetic jars. To obtain the genetic material it is sufficient when participants donate a small amount of saliva in the jar, which is non-invasive. This genetic material will be analyzed in order to find out whether it contains particular polymorphisms. In the protocol (NWO grant application form) we have focused on the dopamine DRD2 gene, but in the project other polymorphisms will be examined as well. The final selection of polymorphisms (5 to 10 in total) that will be analyzed will be based on the polymorphisms that have been identified in scientific studies at that time

Including the three new assessment waves we will have a unique data set on 400 families who have been assessed six times over a period of 5 years. Such a data set is necessary in order to describe the development of alcohol use and its various aspects (experimentation, regular drinking, drunkenness, problem drinking).

### **Study burden and risks**

As described under point E9a, there will be no risk attached to participating to this study, and the burden will be very small. The reason is that the participants will not undergo any invasive treatment, and will be only asked to fill out one questionnaire during each assessment wave, and to donate a small sample of saliva into a small jar by spitting into it.

## **Contacts**

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## **Trial sites**

## Listed location countries

Netherlands

## Eligibility criteria

### Age

Adolescents (12-15 years)

Adolescents (16-17 years)

Adults (18-64 years)

Elderly (65 years and older)

### Inclusion criteria

Participants have to be biologically related and to be living together at the first measurement wave (2002).

### Exclusion criteria

Families were excluded when one or both children were mentally or physically handicapped, and when they were twins.

## Study design

### Design

**Study type:** Observational non invasive

Masking: Open (masking not used)

Control: Uncontrolled

Primary purpose: Prevention

### Recruitment

NL

Recruitment status: Pending

Start date (anticipated): 06-01-2006

Enrollment: 1600

Type:

Anticipated

## Ethics review

Approved WMO

Application type:

First submission

Review commission:

CMO regio Arnhem-Nijmegen (Nijmegen)

## Study registrations

### Followed up by the following (possibly more current) registration

No registrations found.

### Other (possibly less up-to-date) registrations in this register

No registrations found.

### In other registers

**Register**

**ID**

CCMO

NL11373.091.06