

# Virtual Reality to Assess How Boys with Mild to Borderline Intellectual Disabilities Behave in Social Situations

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

## Summary

### ID

NL-OMON50880

### Source

ToetsingOnline

### Brief title

Social situations in Virtual Reality

### Condition

- Developmental disorders NEC

### Synonym

Agression

### Research involving

Human

### Sponsors and support

**Primary sponsor:** Universiteit Utrecht

**Source(s) of monetary or material Support:** Ministerie van OC&W

## Intervention

**Keyword:** Boys, Mild to borderline intellectual disabilities, Sociale informatieverwerking, Virtual Reality

## Outcome measures

### Primary outcome

Social information processing

Aggressive behavior

### Secondary outcome

Physiological indicators of arousal

## Study description

### Background summary

Aggressive behavior problems are the most prevalent mental health problems among youth, especially for youth with mild intellectual disabilities and borderline intellectual functioning (MID-BIF). Aggressive behavior problems have negative consequences for both the child and its environment and result in an economic burden for society at large. Additionally, aggressive behavior problems of youth with MID-BIF tend to persist over time, more so than those in peers with average intelligence. Since social information processing (SIP) is an important mechanism underlying aggressive behaviour, assessment of SIP using actual engaging social situations as they occur in Virtual Reality (VR) will shed new light on individual differences in aggressive behavior among youth with MID-BIF. VR will be implemented because it might provide a more valid reflection of SIP that precede real-time behavior in emotionally engaging situations compared to the hypothetical situations using traditional vignettes. Considering that this new method to assess SIP has not been examined yet among youth with MID-BIF, clear implications for developmental theories and future studies will be obtained.

### Study objective

The first aim is to investigate whether SIP indicators measured with VR are better predictors of aggression in real-life than SIP indicators measured with hypothetical vignettes in youth with MID-BIF. The second aim is to explore whether we can validly measure physiological indicators of arousal in the VR

environment. If so, we will compare the levels of arousal in VR compared to the vignette assessment. Additionally, we will examine physiological patterns of over- and under-arousal in the reactive and proactive social situations in VR.

## **Study design**

We will use an experimental design in which we use SIP methodology as within-subjects factor (VR versus vignette assessment). The assessment of SIP via VR and vignette assessment will be counterbalanced to prevent sequence effects.

## **Study burden and risks**

The burdening of the participants is kept to a minimum. Participants will spend 2 times approximately 45 minutes with a week in between. From our previous studies, we know that children like to participate in both the assessment in VR as the assessment in which we use vignettes. Although Virtual Reality environments might generate frustration, mild aggression, and \*cybersickness\*, no risk of harm or adverse consequence of participation is expected. The social situations children encounter in VR are similar to the situations they encounter in daily life. The possible contribution of the research to both theory formation and practical usability is substantial and will provide insights into the application of VR environments to assess SIP in youth with MID-BIF. This way, we might assess social information processing validly to better understand the individual differences in SIP underlying aggressive behavior problems. Aggressive behavior problems of youth with MID-BIF tend to persist over time, more so than those in peers with average intelligence. Additionally, many treatments of aggressive behavior problems in youth with MID-BIF focus on improving social information processing. Therefore, it is particularly important to understand the mechanisms underlying aggressive behavior and improve assessments of SIP for these youth. Furthermore, VR may potentially also be used to improve treatment for youth with MID-BIF and aggressive behavior problems by addressing the deviancies in SIP in VR.

## **Contacts**

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## Trial sites

### Listed location countries

Netherlands

## Eligibility criteria

### Age

Adolescents (12-15 years)

Adolescents (16-17 years)

Children (2-11 years)

### Inclusion criteria

Boys 10-16 years

IQ 50-85

### Exclusion criteria

Motion sickness

## Study design

### Design

Study phase:	2
Study type:	Observational non invasive
Masking:	Open (masking not used)
Control:	Uncontrolled
Primary purpose:	Diagnostic

## Recruitment

NL	
Recruitment status:	Pending
Start date (anticipated):	01-09-2021
Enrollment:	90
Type:	Anticipated

## Ethics review

Approved WMO	
Date:	10-09-2021
Application type:	First submission
Review commission:	METC NedMec
Approved WMO	
Date:	21-10-2021
Application type:	Amendment
Review commission:	METC NedMec

## 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	NL78054.041.21