



CRMR Maladies Rares à
Expression Psychiatrique



Cognitive Remediation

3rd european 22q11-deletion syndrome conference, November 16-17 2019, Barcelona

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<http://www.ch-le-vinatier.fr/offre-de-soins/la-recherche/genopsy-2098.html>

Reference Center GenoPsy



Pr. Caroline DEMILY

Reference Center for rare disease GenoPsy
Head of the psychiatric department
« Autism and Severe Intellectual Deficiency »
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centre de référence



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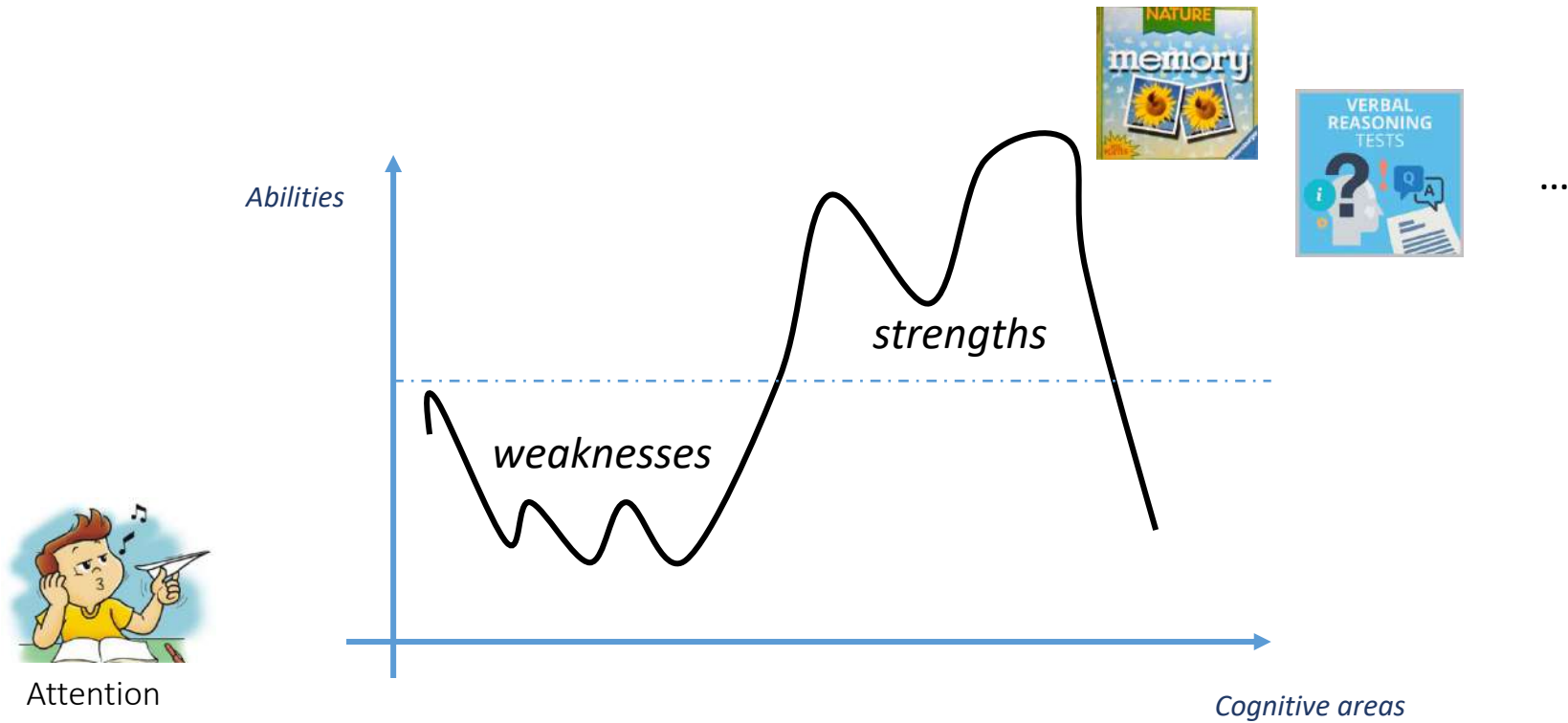


centre de référence
maladies rares

Reference Center Genopsy, a national reference unit for rare disease with genetic etiology and psychiatric symptoms (children & adults).



Heterogeneous cognitive abilities in 22q11.2DS



Visuo-spatial skills



Social Cognition

Heterogeneous cognitive abilities in 22q11DS

weaknesses



- Schooling & Working
- Autonomy in daily life
- Behaviours and social interactions



Attention



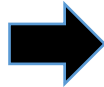
Visuo-spatial skills



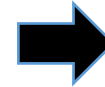
Social Cognition



Deficit in visual attention



Poor perception of social scene



Inappropriate behaviour

Heterogeneous cognitive abilities in 22q11DS

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- Schooling & Working
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Attention

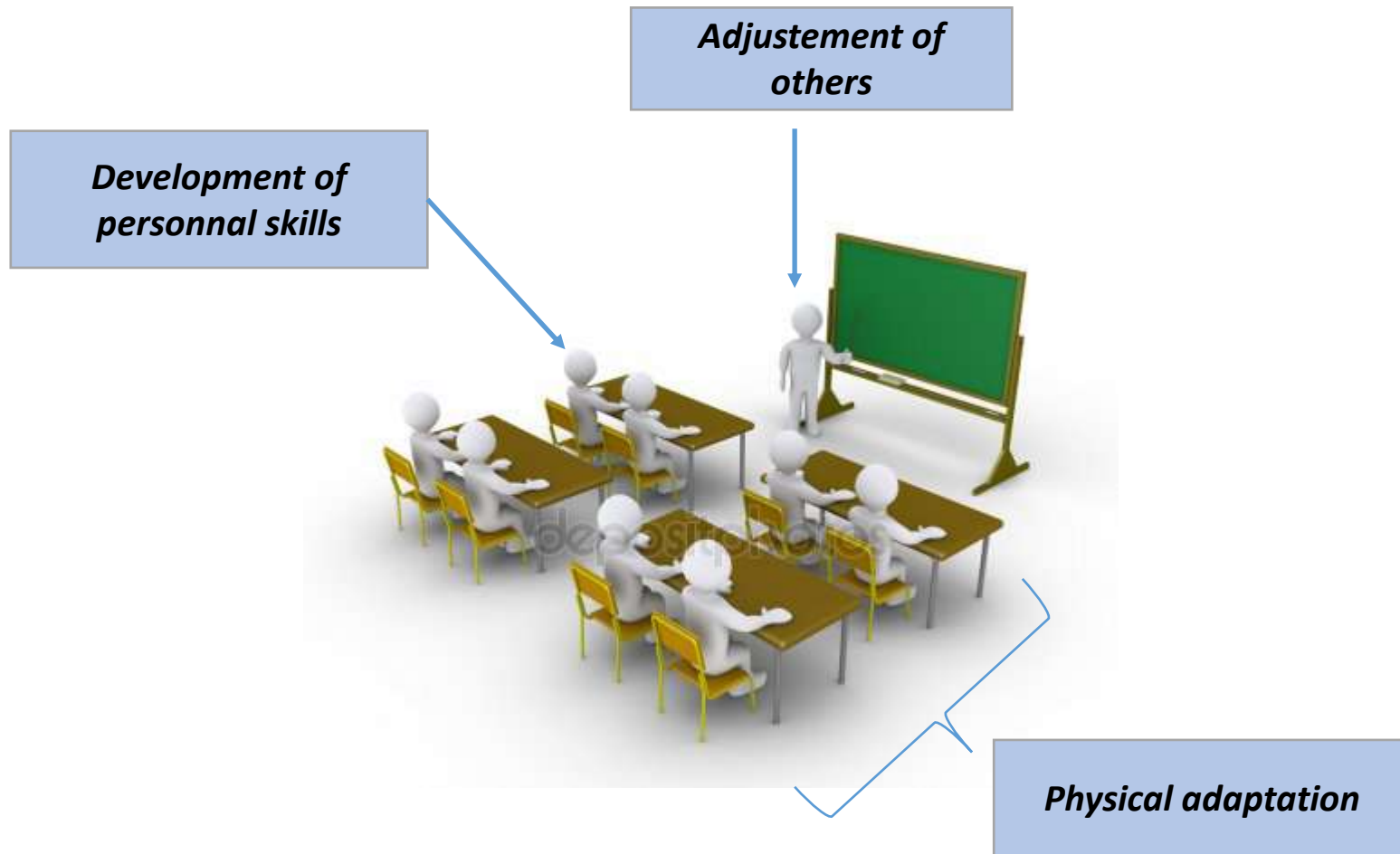


Visuo-spatial skills

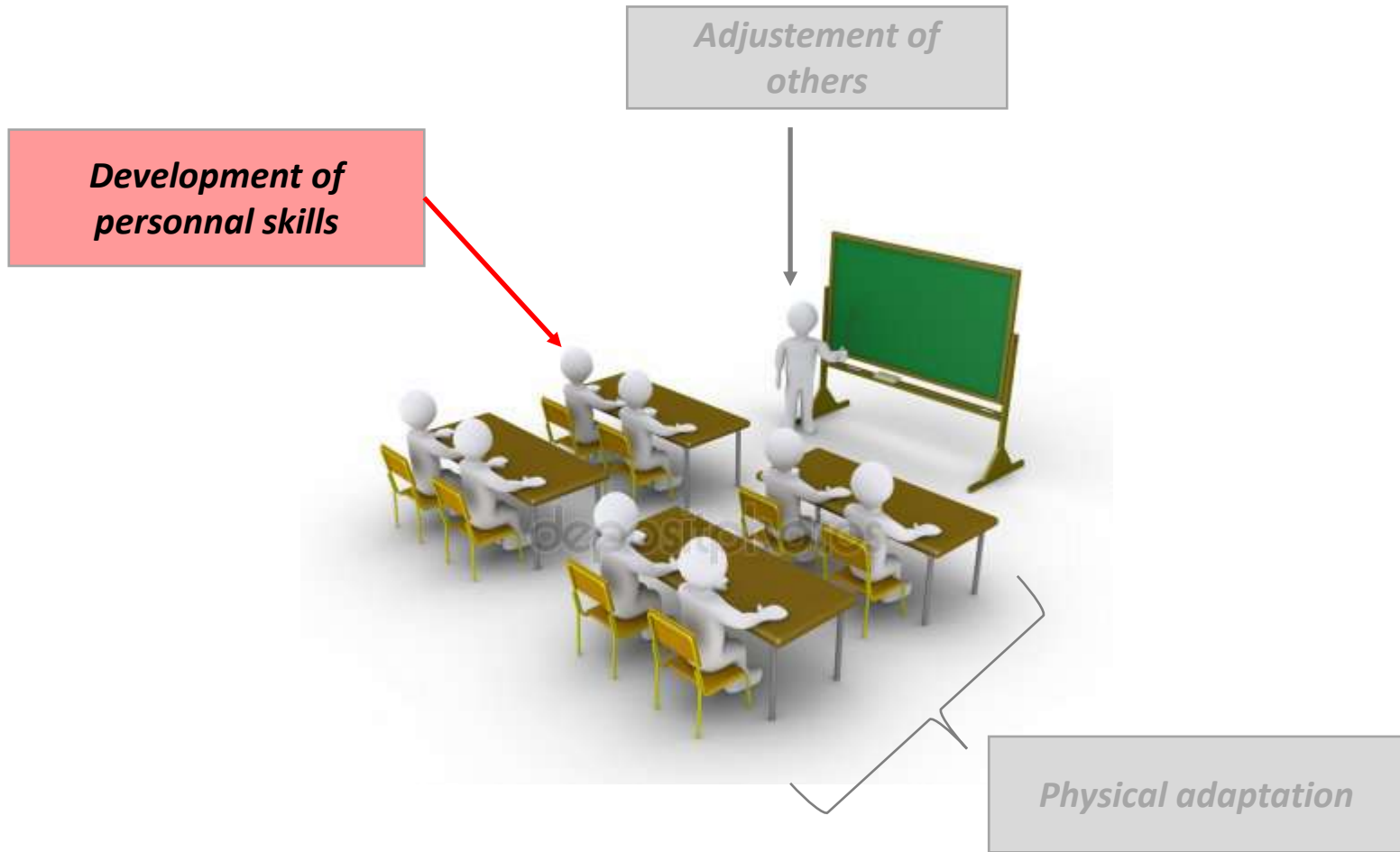


Social Cognition

Care strategies



Care strategies



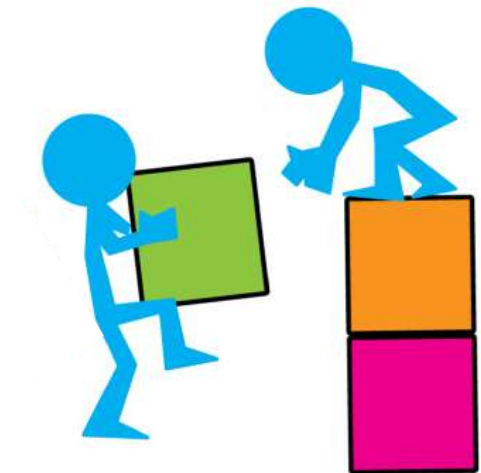
The fundamental principles of cognitive remediation

A non-pharmacological therapy
Improving cognitive functions
and daily life adaptative skills

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Interactive
process



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**Concrete
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**Alternative
strategies**



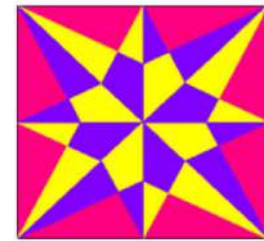
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Metacognition



Review of cognitive remediation programs

Clinical population:

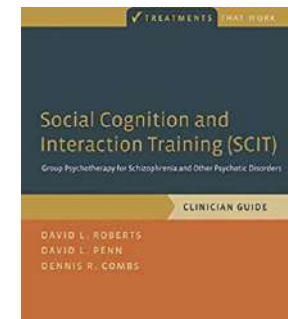
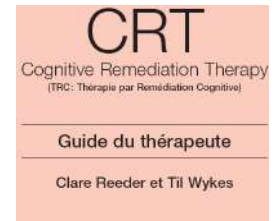
- Schizophrenia
- ADHD
- ASD
- Mood and anxiety disorder
- ...

Main characteristics:

- Intensive therapy
- Time-limited
- Individual / group therapies
- Various cognitive areas including social cognition

Significant effects on:

- Cognitive functions
- Psychiatric symptoms
- Social functioning
- Self-esteem, quality of life
- Nb of psychiatric admissions



Issues and challenges

General

22q11.2DS

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- Motivation & adherence

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- Generalization of skills (→ at home activities)

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- Global programs vs specific cognitive & behavioral profile in 22q11.2DS

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- Need of active coaching vs geographical distance (rare disease)

Issues and challenges

General

- Motivation & adherence
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22q11.2DS

- Global programs vs specific cognitive & behavioral profile
- Need of active coaching vs geographical distance (rare disease)
- Only preliminary Clinical studies

Remediation of neurocognition in 22q11.2DS

CCRP Program developed by Posit Science (Harrell et al., 2013)

- Focused on Attention, working memory and processing speed
- At home self-administered computerized program (12 weeks)
- Good feasibility and preliminary positive results on cognitive performance of children

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COM program (Bracy et al., 1999; Mariano et al., 2015; Mariano et al., 2018)

- computerized program and web conferencing active coaching (3/weeks)
- Improvement of cognitive flexibility, reaction time and working memory of adolescents
- Maintained over 6-months follow-up

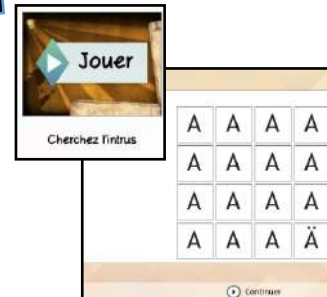
Remediation of neurocognition in 22q11.2DS

COGNITUS & MOI: a cognitive remediation tool designed to train the attentional and visuospatial skills of 5-13 year-old children (Demily et al., 2016; Favre et al., 2018)

Paper-and-pencils activity



Computerized activity



At-home activity



16 weekly sessions

*Active coaching approach
flexible set of exercises that
are individually adapted to
the child's clinical profile*

Remediation of social cognition in 22q11.2DS

SCT Curriculum (Shashi et al., 2015)

- Small groups, 26 weekly sessions
- Concepts & exercises on perspective taking, social context appraisal
- Coach during sessions + monthly telephone calls
- homeworks
- Good feasibility & Qualitative and quantitative improvements

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SOSTA-22 digital version (Glaser et al., 2018)

- Small groups, 12 weekly sessions, Video conferencing
- adolescents & young adults
- information presentation and practicing homeworks
- Specifically adapted to socio-cognitive profile of 22q11.2DS
- Good feasibility & Qualitative and quantitative improvements

Remediation of social cognition in 22q11.2DS

RC-KID: a tool using eye-tracking feedbacks in the perspective of improving visual scanning of faces and thus social skills (Peyroux et al., under review)

- *Trained skills:*
 - *recognition of isolated expressions*
 - *facial expression imitation*
 - *adapted behavior during social interactions*
- *Static and dynamics stimuli*
- *Active coaching approach*
- *3 case-studies : improvement of emotion identification and comprehension*



Cognitive remediation in practice

- A useful therapy in case of psychiatric conditions
- Preliminary but highly encouraging studies in 22q11.2DS

Cognitive remediation in practice

BUT Conditions of use :

1. Program adapted to patient's clinical profile and project
 - Exhaustive clinical and neuropsychological assessment (cognitive strengths and weaknesses)
 - Patient's (& parents') approval and motivation

2. **Clinical stability**, minimal dose of antipsychotic drugs

3. **Better results in cognitively less impaired patients**
(→ ID: specific programs)

4. Program with active coaching