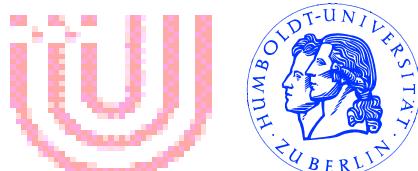


Implicit and explicit measures of aggressive behavioural tendencies of adolescents –

Results of an intervention study

**Implicit and explicit measures of aggressive behavioural tendencies of adolescents –
Results of an intervention study**



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² (Humboldt-University Berlin)

Preliminary notes

"Fit for Life"

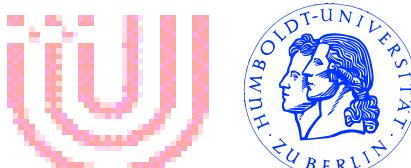
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Outline of the talk

1. Preliminary notes on the subject
2. The Programme "Fit for Life"
3. The Intervention Study
4. The collected data on Aggressive behavioural tendencies
5. Effects of the Intervention
6. Summary and conclusion

Preliminary notes

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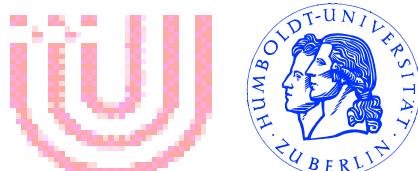
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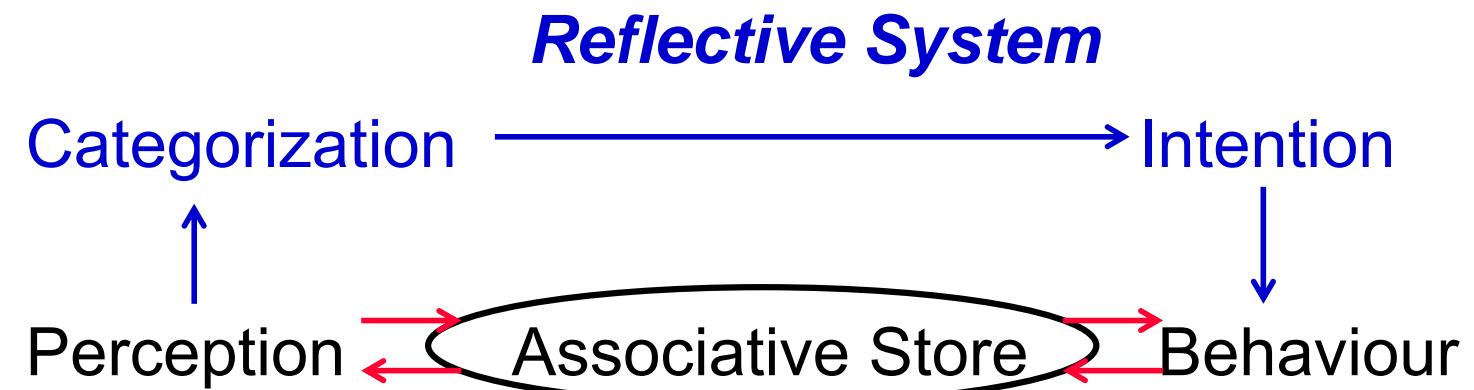
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Reflective and impulsive Determinants of Behaviour

Behavior is a final common pathway of two different systems of information processing
(Strack & Deutsch, 2004)



Impulsive System

Strack, F. & Deutsch, R. (2004). Reflective and Impulsive Determinants of Social Behaviour. *Personality and Social Psychology Review*, 8 (3), 220-247.

Preliminary notes

"Fit for Life"

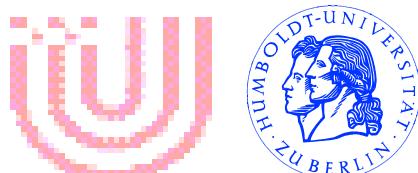
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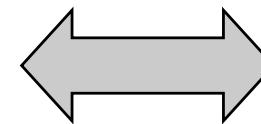
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Advantages of the Two-Determinants-Model of Behaviour

Reflective System



Impulsive System

Knowledge-based behaviour decisions controlled by facts and values

behaviour, elicited by motivational orientations and associative links

Interaction of both behavioural systems in all stages of information processing

No limitation to specific areas of mental processing or behaviour

Integration of cognitive, motivational, and behavioural processes

Preliminary notes

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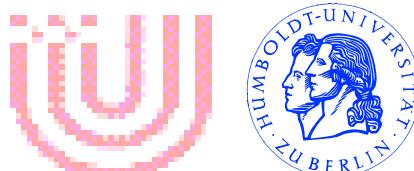
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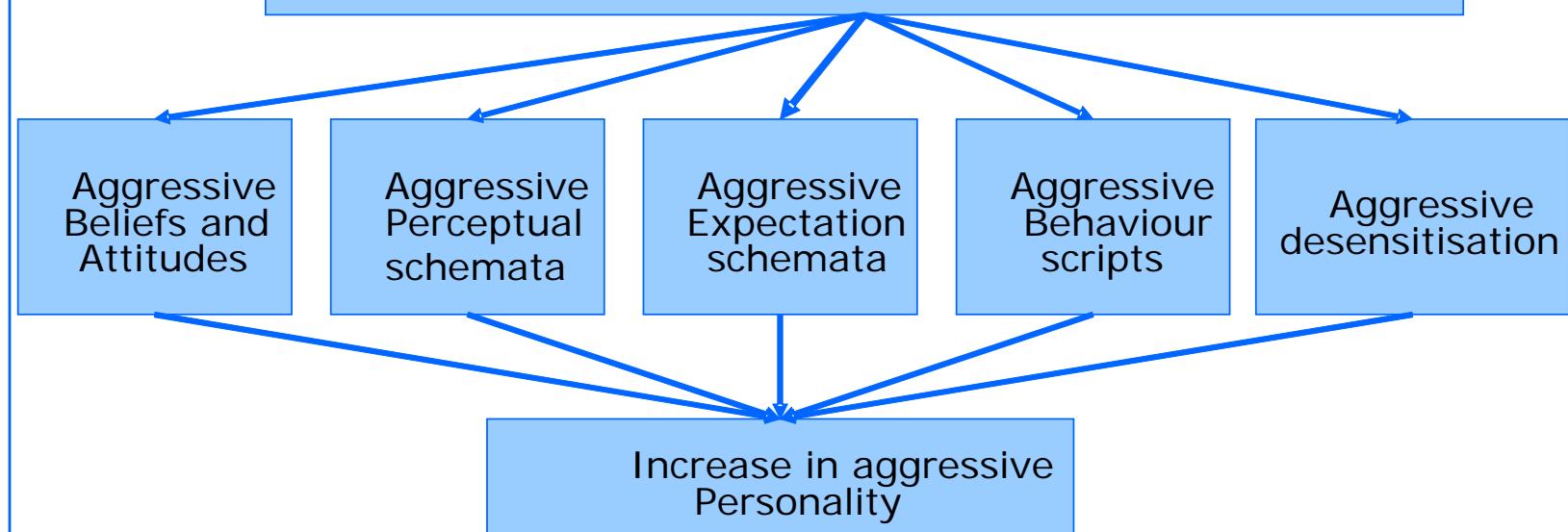
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Model of aggressiveness

Creation and automatization of aggressive-related knowledge structures by learning, rehearsal, and reinforcement



Anderson, C.A. & Bushman, B.J. (2004). Human Aggression. *Annual Review of Psychology*, 53, 27-51 .

Preliminary notes

["Fit for Life"](#)

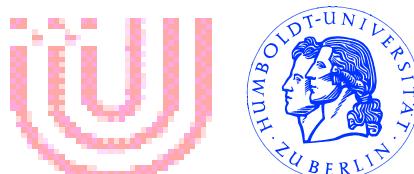
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Fit for Life (Jugert, Rehder, Notz & Petermann, 2001)

Modules and worksheets to improve social skills

Target group: disadvantaged adolescents

- secondary schools
- assisted living
- industrial training
- integration programmes
- juvenile probation time
- juvenile penal system

Focus on social competences like

- social abilities and skills
- perception of social tasks and situations
- attitudes, way of social-cognitive information processing

Preliminary notes

["Fit for Life"](#)

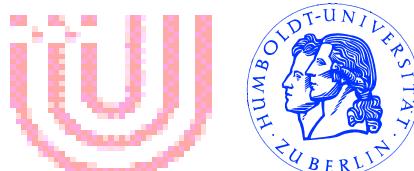
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Module of the Programme

- Motivation
- Health
- Selfconfidence
- Bodylanguage
- Communication
- Fit for Conflicts - Part 1
- Leisure activities
- Future orientation
- Vocational future
- Emotions
- Empathy
- Fit for Conflicts - Part 2
- Feedback

The wise guy concedes...
I'm afraid so...



Preliminary notes

["Fit for Life"](#)

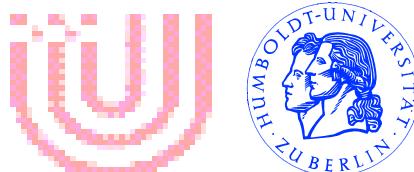
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Previous evaluation results

- Categories for the observation of aggressive, passive, and social competent behaviour
(Petermann & Petermann, 2000)



- reduction of unwanted, increase of wanted behaviour as rated by the trainers
- no such effects rated by external observers
- no significant change in personal assessment



Petermann, F. & Petermann, U. (2000). *Training mit Jugendlichen. Förderung von Arbeits- und Sozialverhalten*. Weinheim: PVU.

Preliminary notes

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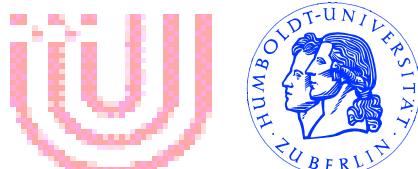
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Our Intervention study

- 18- to 22-year-old adolescents
- IQ scores in the borderline retarded range of mental functioning (IQ<85) with learning difficulties
- graduated from a school for mentally handicapped children
- now in special vocational training

Pretest T1		Posttest T2	
EG (N=34)	CG (N=15)	EG (N=27)	CG (N=11)

Preliminary notes

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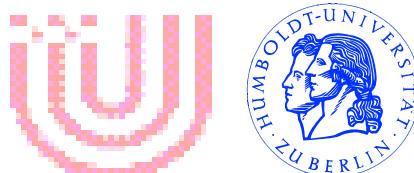
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Explicit measures of Aggressiveness

Pre- and Post: Rating by adults:

two attributes, 7-degree rating

- physical aggressiveness
- verbal aggressiveness

- trainers ($\alpha=.87$)
- Social education workers ($\alpha=.79$)
- instructors ($\alpha=.80$)

Bitte denken Sie an die/den Jugendliche/n und ihr/sein Verhalten in den letzten 14 Tagen.

Wie schätzen Sie zum jetzigen Zeitpunkt die/den Jugendlichen bezüglich folgender Eigenheiten ein?	Ausmaß						
	Null	1	2	3	4	5	Total
1. Ehrlichkeit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
2. Freundlichkeit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
3. Gute Laune	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
4. Höflichkeit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
5. Mitgefühl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
6. Soziale Kompetenz	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0
7. Kompetenz für das Berufsleben	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0

1) Wer von Deinen Mitschülern ist oft nett zu anderen?

Namensliste	Hier bei drei Namen ein Kreuz machen
[Redacted]	

Kreuze bitte hier an, wie sich die Aggressivität des Azubis seit der letzten drei Monate verändert hat.

	Dieser Azubi ist im Vergleich zum Zeitpunkt vor drei Monaten ...				
	viel weniger aggressiv	etwas weniger aggressiv	gleich aggressiv	etwas mehr aggressiv	viel mehr aggressiv
[Redacted]	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
[Redacted]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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[Redacted]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
[Redacted]	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Only in Posttest:

Peerrating: 5-degree rating on changes in behaviour ($\alpha=.49$)

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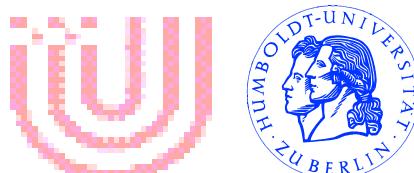
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Implicit measure of Aggressiveness

Implicit Association Test - Simple IAT

(Banse & Fischer, 2002)

	Pics	Task	Left Button	Right button
1	60	Compatible	Me, peaceful	Others, aggressive
2	60	Incompatible	Me, aggressive	Others, peaceful
3	60	Compatible	Me, peaceful	Others, aggressive
4	60	Incompatible	Me, aggressive	Others, peaceful

SIAT-Score:

Mean (Compatible - Incompatible)

SIATD-Score:

Mean (Compatible - Incompatible)/SD

IAT-data	Cronbach's α T 1	Cronbach's α T 2	correlation T 1 ~ T 2
N	46	35	
SIAT	.59	.75	.44 **
SIATD	.43	.76	.41 **

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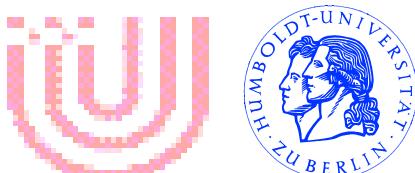
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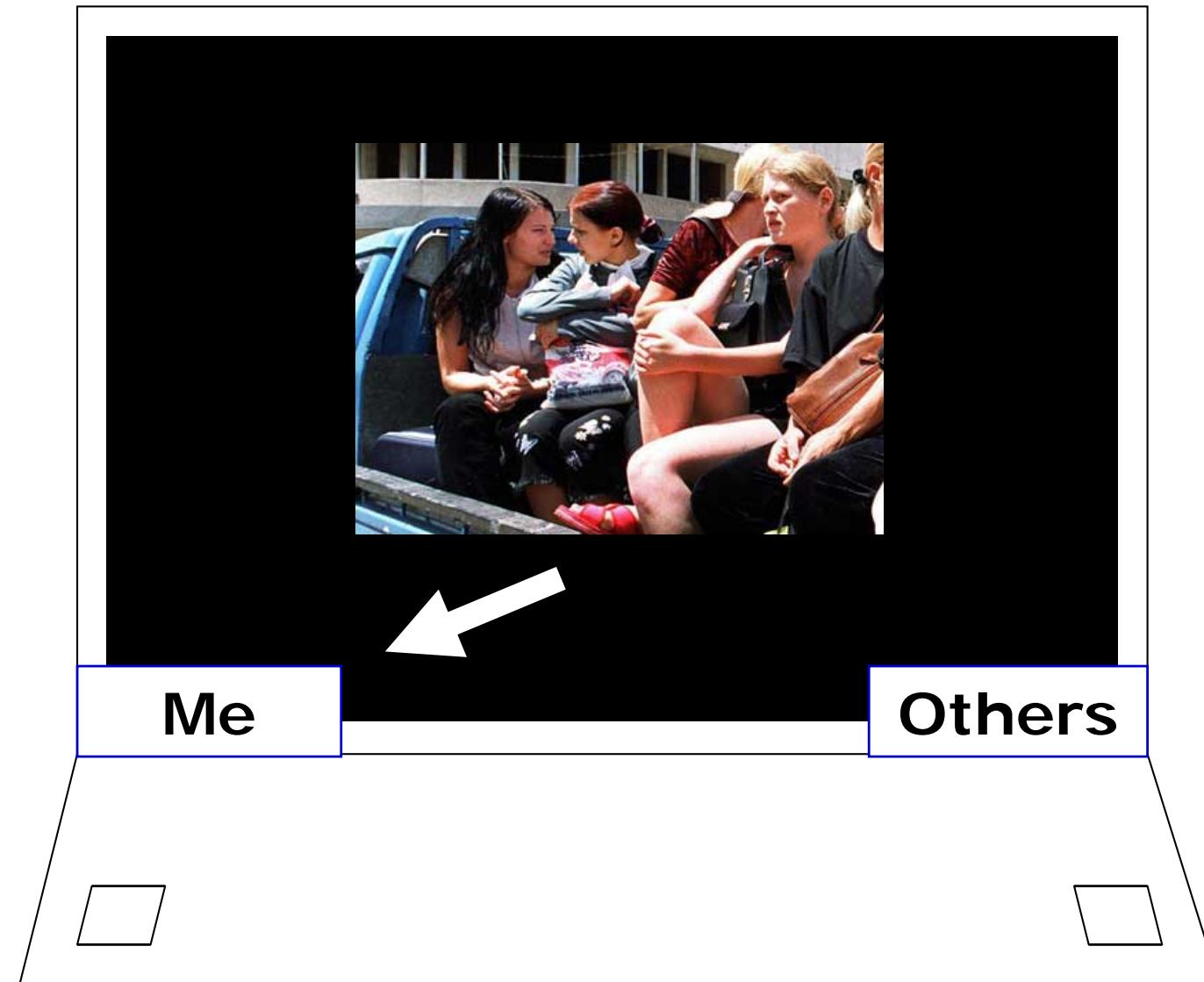
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Me, peaceful – Others, aggressive



Banse, R. & Fischer, I. (2002). *Implicit and explicit aggressiveness and the prediction of aggressive behavior*. Poster presented at the 11th European Conference on Personality by the European Society for Personality Psychology, July 21-25, Jena.

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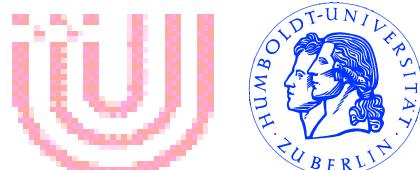
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Me peaceful – Others, aggressive



ME

Others

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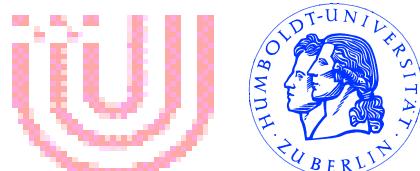
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Me, aggressive - Others, peaceful



ME

Others

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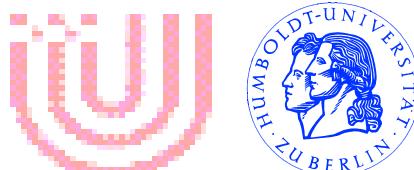
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Some notes on the results of the study:

- nonverbal IAT not sufficiently validated yet
- validation with highly aggressive adolescents still missing
- boredom though the IAT was designed matching for the target group
- only two items for explicit aggressiveness
- no explicit self-rating of aggressiveness
- small sample
- differences between experimental group EG and control group CG in Pretest already

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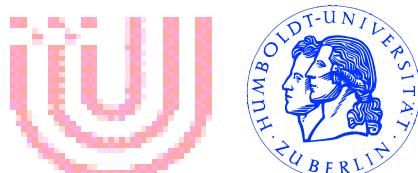
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Correlationen between explicit and implicit measures

SIATD-Measure	T 1	T 2
Rating by adults		
Trainers	.16 (.27)	.11 (.18)
Social edu. workers	.21 (.36)	.20 (.35)
Instructors	-.04 (-.08)	-.05 (-.08)

in brackets: attenuated Pearson-correlation

Correlation	SIATD1
Peernominating (Prä)	
Mean (pos. Nominations)	-.12
Mean (neg. Nominations)	-.06
Behavioural index (neg.-pos.)	.002

Correlation	SIATD2-SIATD1
Peerrating (Post):	
Score of Change	-.001

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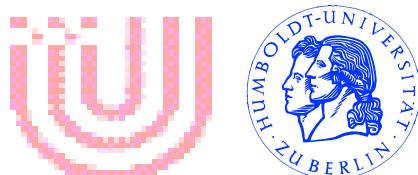
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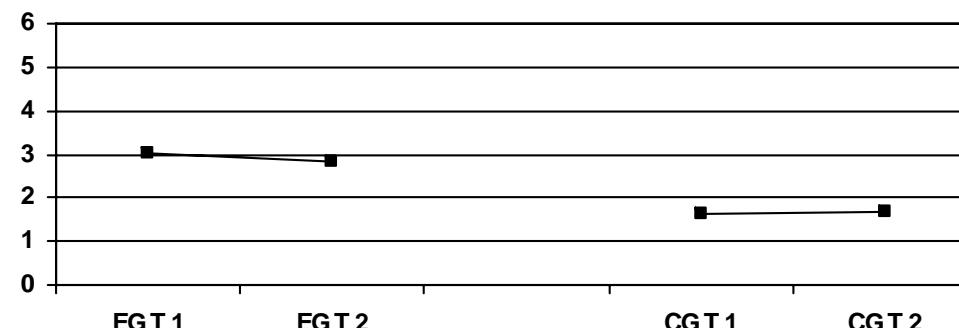
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Intervention effects in explicit measures

Rating of the Social education workers



$d=-0.12$

$d=0.05$

Differences between EG and CG

Pre: $d=1.07$

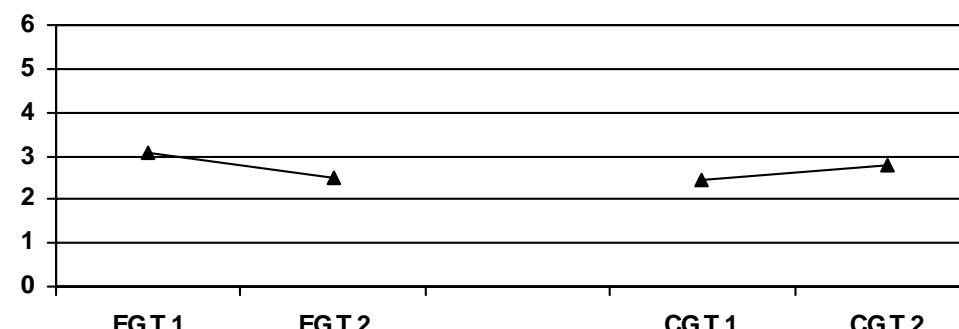
$t(38.84)=3.61, p=.001$

Post: $d=0.93$

$t(36)=2.28, p=.029$

Post: $d_{corr.}=0.15$

Rating of the Instructors



$d=-0.38$

$d=0.19$

Pre: $d=0.44$

$t(39)=0.99, p=.32$

Post: $d=0.16$

$t(36)=-0.45, p=.65$

Post: $d_{corr.}=0.62$

Preliminary notes

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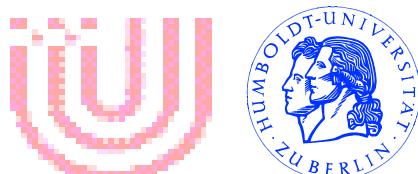
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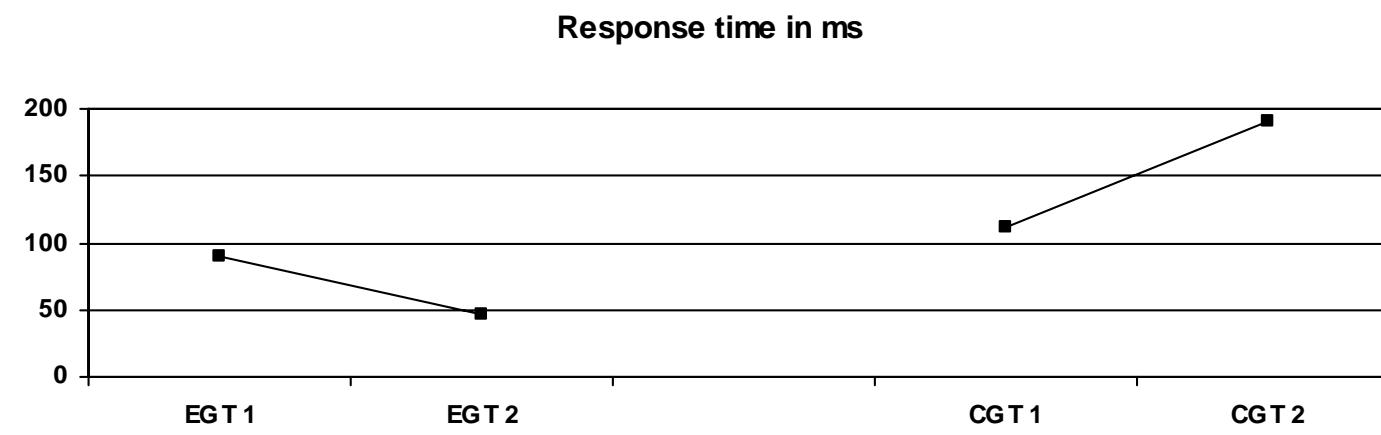
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Intervention effects in implicit measures



$$d=0.33$$

$$d=0.68$$

Differences between the groups

Pre: $d=0.16$

Post: $d=1.19$

Post: $d_{corr.}=1.05$

$t(33)=-0.41, p=.69$

$t(33)=-3.22, p=.003$

$d_{corr.}$ = adjusted effect for Pre-Test-Differences

Klauer, K. (1993). *Denktraining für Jugendliche. Ein Programm zur intellektuellen Förderung.* Göttingen: Hogrefe.

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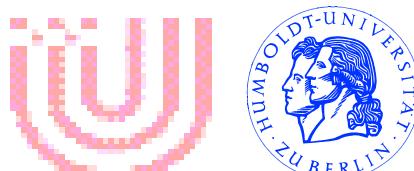
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Summary and Conclusion

- Intervention study to increase social skills of disadvantaged adolescents
- Evaluation Pre-Post in Experimental-Control-Group-Design
- Measurement of both explicit and implicit measures of aggressiveness
 - Rating by adults, Peernominating, Peerrating
 - Non-verbal Implicit Association Test Simple-IAT
- Correlations up to $r=.21$ between IAT and rating by adults
- No correlations to other explicit measures
- Effect of change $d\leq0.62$ in observable behaviour
- Effect of change $d=1.05$ in implicit measure

Preliminary notes

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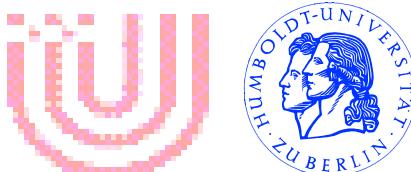
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Thank you very much for your attention

I am just totally motiveless aggressive!

Ich bin einfach völlig grundlos total aggressiv!



all pictures from Jugert et al. (2001)