



Promoting self-regulation in toddlers born preterm – a parent training program

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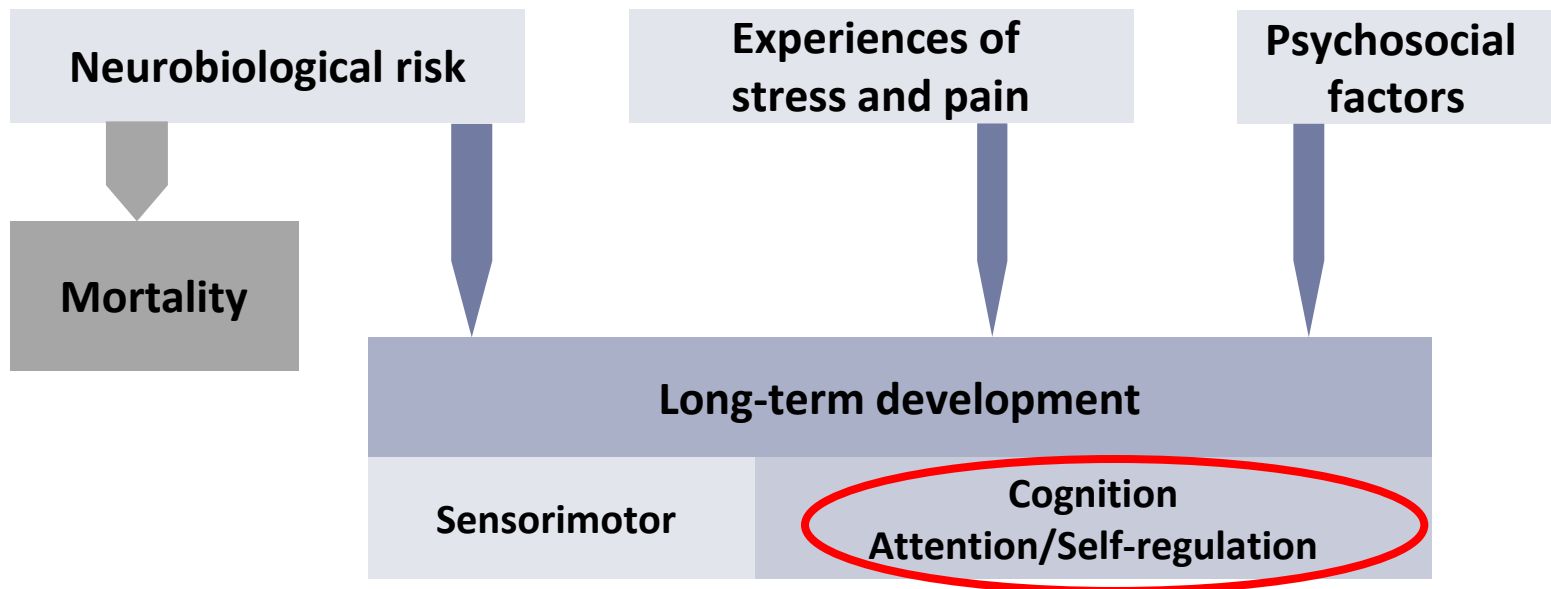
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BACKGROUND

- Prevalence: ca. 9% of infants are born premature (< 37 weeks of gestational age) (Beck et al., 2010; IQTIG Qualitätsreport 2015, 2015; Pöschl, 2017)
- Very preterm born children have an increased risk for adverse development: **self-regulation (SR), cognitive & attentional deficits**
(Aarnoudse-Moens et al., 2009; Anderson et al., 2011; Arpi & Ferrari, 2013; Bhutta, Cleves, Casey, Cradock & Anand, 2002; Mulder et al. 2009)



BACKGROUND

- To develop self-regulation, children largely depend on **parental co-regulation (CR)** strategies (Fay-Stammbach et al. 2014)
- **Scaffolding & Sensitivity:**
 - **Sensitive parenting** may act as a protective factor (Jaekel, Pluess, Belsky, & Wolke, 2015; Ravn et al., 2011; Treyvaud et al., 2009; Wolke, Jaekel, Hall, & Baumann, 2013).
 - **Parental scaffolding** predicts better executive functioning, problem-solving, verbal and cognitive skills (e.g. Landry, Miller-Loncar, Smith, & Swank, 2002; Lowe, Erickson, MacLean, Schrader, & Fuller, 2013; Lowe et al., 2014)
- Parents of Preterm Children show less scaffolding behavior and sensitive interaction with their child (Choe et al., 2013, Hoffmann et al., 2006)

METHODS

- Experimental 2x3 design
- 148 parent-child-dyads:
 - 50 preterm
 - 98 full-term
- Children's age: 24-36 month
- Randomly assigned to:
 - (a) Scaffolding Training
 - (b) Scaffolding & Sensitivity Training
 - (c) Control group (Stressmanagement)



MEASURES

- Pre-/ post-test/ follow-up assessment
- Multimethod approach (parent & child)

Bayley Scales-III: cognitive scale (Reuner & Rosenkranz, 2014)

Video-observation of parent-child interaction during problem-solving (Gärtner et al., under review)

Self-regulation tasks: Delay of gratification and Go No-Go task (Voigt et al. 2013)

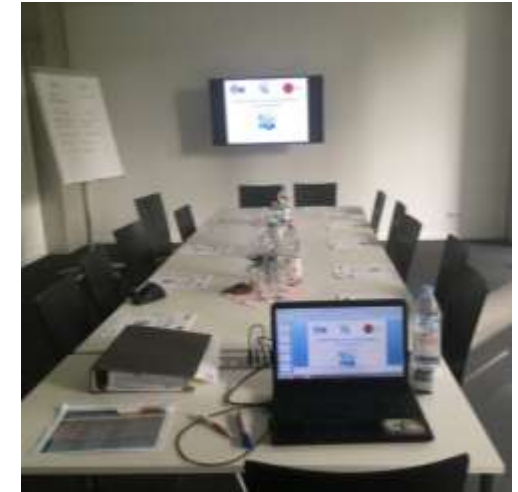
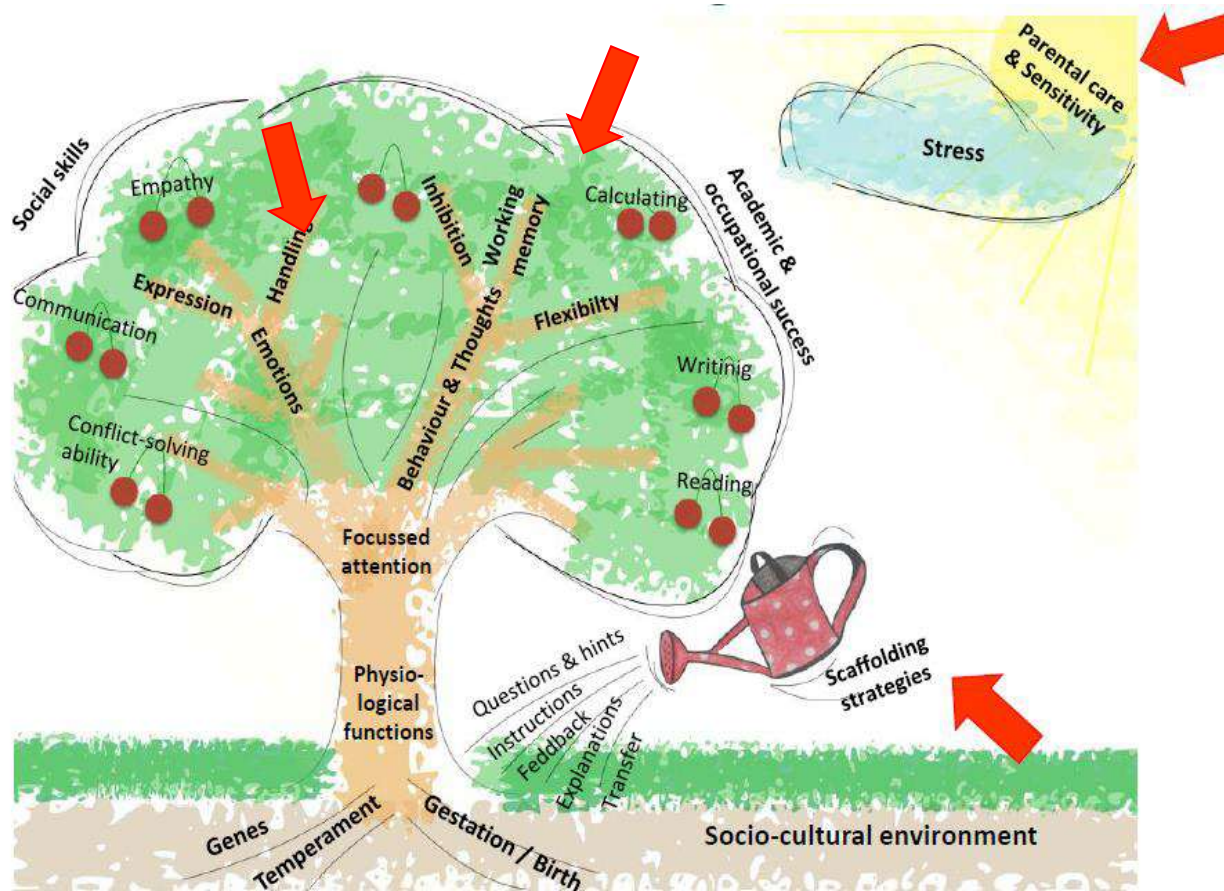
Questionnaires: e.g. BRIEF-P, ECBQ, CBCL, PSI, ...

SAMPLE

N= 148

	n	Preterm (PT)	n	Full-term (FT)	χ^2/t	p
Parents' age [years] M (SD)	50	37.64 (5.61)	98	35.56 (4.52)	2.81	.006
Parents' sex [female] %	50	80.0	98	85.7	0.80	.372
Parents with twins %	39	33.3	91	1.1	33,37	<.001
Socioeconomic status M (SD)	39	16.30 (3.19)	91	16.58 (3.40)	0.48	.633
University-entrance diploma %	50	68.0	97	90.7	20,19	<.001
Child's (corrected) age [months] M (SD)	50	27.35 (3.59)	98	27.44 (3.27)	0.16	.875
Child's sex [female] %	50	50.0	98	39.80	1.41	.236
Gestational age [weeks] M (SD)	50	30.08 (3.77)	97	39.42 (1.28)	17.01	<.001
Birth weight [g] M (SD)	50	1408.9 (676,93)	98	3391,93 (467,81)	18.58	<.001
Child's cognitive performance at 24 months of age (Bayley-III) M (SD)	48	93.65 (16.91)	98	99.69 (13.66)	2.32	.022

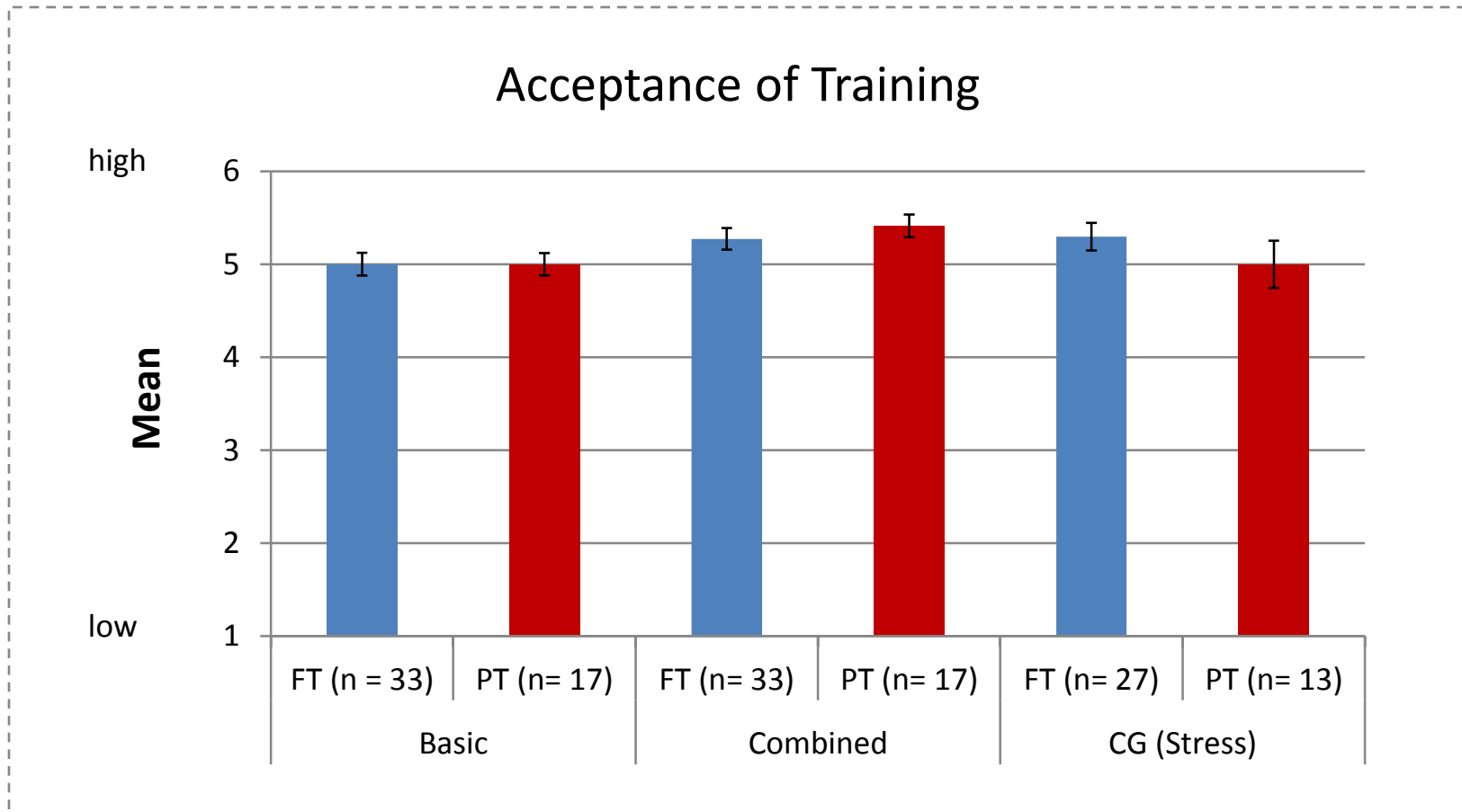
INTERVENTION



INTERVENTION

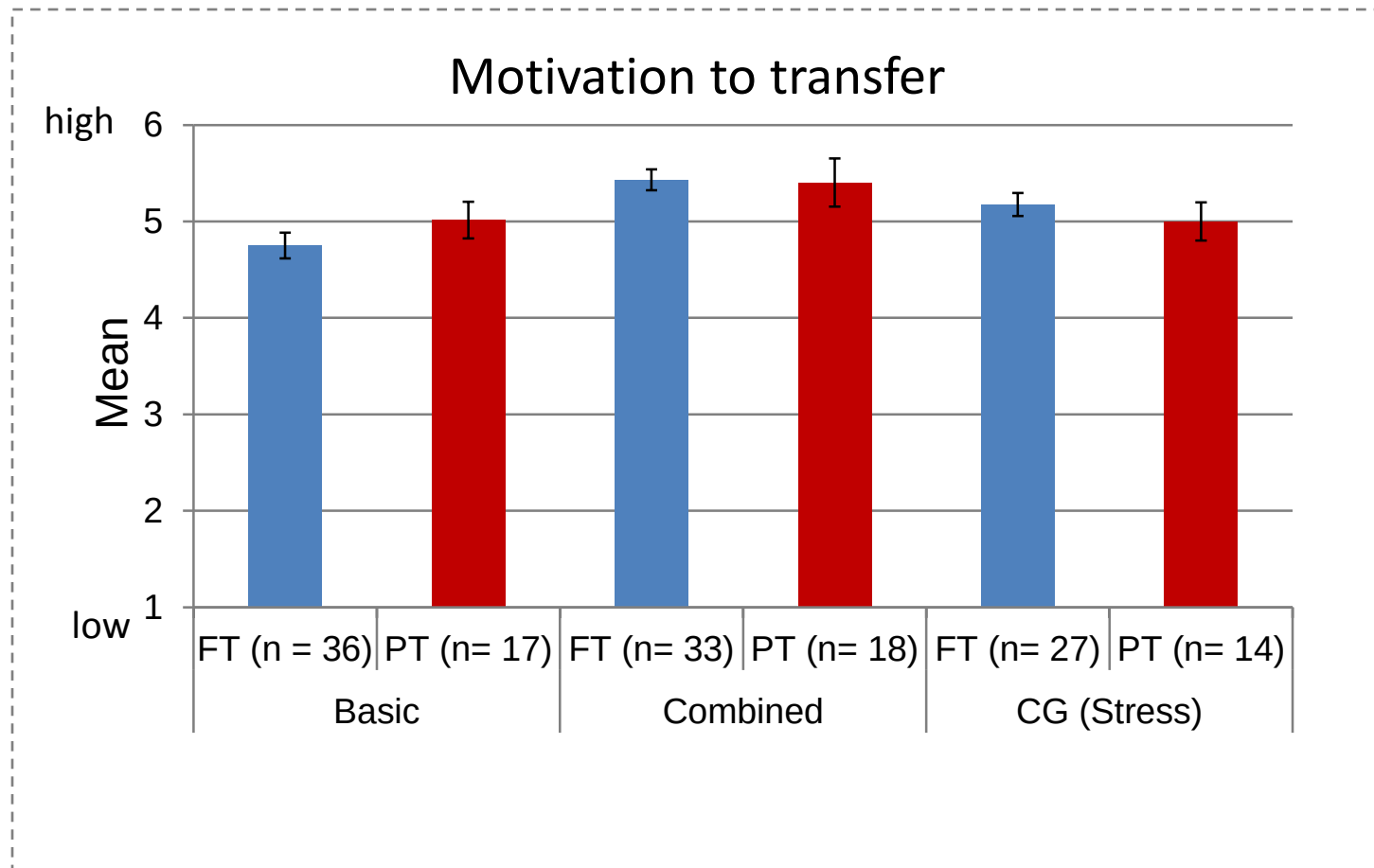
Sessions (à 180 min.)	Combined training: Parental scaffolding and sensitivity
Session 1	• Development of self-regulation • Co-and self-regulation: parental scaffolding and sensitive parenting • Zone of proximal development (Vygotsky) • Child competence and development
Session 2	• Play and self-regulation • Scaffolding means: Questions & hints • Reading the child's signals
Session 3	• Emotions and emotion-regulation in early childhood • Mirroring and labelling emotions • Scaffolding means: Instructions, feedback, explanations and transfer
Session 4	• Setting boundaries sensitively vs. transferring responsibility • Handling anxiety • Summary and reflection on the learned strategies

RESULTS



>> T-Test: FT: $M= 5.18$, $SD=0.72$, $n=93$ / PT: $M= 5.15$, $SD=0.66$, $n=47$
 $t(138)= 0.270$ $p= .788$

RESULTS



>> T-Test: FT: $M= 5.10$, $SD= 0.82$, $n=96$ / PT: $M= 5.15$, $SD=0.69$, $n=49$
 $t(112,48)= 0.377$, $p= .707$

DISCUSSION

Limitations

- Small sample of preterm children and parents
- Current data is limited to parental self-report
- Mostly highly educated parents with high SES

>> Further analyses will include observational Data on children's self-regulation

Conclusion

- High reported **acceptance** and **motivation to transfer** for all three training conditions (for both FT and PT parents).
- Parent training to promote self regulation seem to be a promising approach

THANK YOU FOR YOUR ATTENTION!