Self-regulation in family foster children

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Introduction

Early adversity such as neglect, abuse, or prenatal exposure to drugs place children at risk for several maladaptive social, academic, or psychological outcomes, and especially so for impulsivity and inattention problems. Recent research suggest that deficits in self-regulatory skills like executive functions (EF) or emotion regulation underlie these difficulties (Fisher, Leve, Delker, Roos, & Cooper, 2016).

EF are higher order, top-down cognitive processes as inhibitory control, working memory, or cognitive flexibility, that are essential to goal-oriented behavior and self-regulation of behavior, attention and emotions in general (Blair & Ursache, 2011). Although they are generally assessed through direct performance tasks, parent-reported scales as the Behavior Rating Inventory of Executive Functions are also used as a ecologically valid measure (Gioia, Isquith, Guy, & Kenworthy, 2000)

Findings with children who have suffered early adversity, as foster children, have shown how deficits in EF core skills like inhibitory control mediate between adversity and academic adjustment or socioemotional difficulties (Pears, Fisher, Bruce, Kim, & Yoerger, 2010). Furthermore, for children in foster care not just experiences before placement affect negatively EF and self-regulation, but also postplacement variables like placement instability (frequent changes of caregiver) have been found to be detrimental (Pears et al., 2010).

In line with the relevance of self-regulation deficits in children who have suffered early adversity, this study describes foster children EF difficulties in different areas through a parent-reported questionnaire as a preliminary exploration. We also explore the role of adversity variables like physical and sexual abuse or number of previous placements in those foster children with the most severe EF difficulties.

Method

Participants
34 children in non-kin foster care (15 boys, 44.1 %) between 66 and 108 months (M = 89.79, SD = 15.36). Inclusion criteria: age 5-8 years old, living in a non-kin foster placement for at least 6 months in the provinces of Seville and Cadiz (Andalucia, south of Spain), and no physical or psychological disability.

Instruments
Behavior Rating Inventory of Executive Function (BRIEF; Gioia et al, 2000): Parent-reported questionnaire, assess children's EF difficulties in everyday behaviors. 86 items, 3-points Likert scale. Standard scores (T) for age group and gender are provided.
T > 65 = Clinically significant.

Adversity variables: Data on maltreatment history and number of placements was collected from the foster care caseworkers. Severity of physical and sexual abuse (0-5) was coded following the Maltreatment Classification System (Barnett, Manly, & Cicchetti, 1993), and combined to form *severity of active maltreatment*. Preplacement information was only available for 22 participants.

Table 1. BRIEF subscales and indexes description and Cronbach's α

	Short description	N items	Cronbach's α
Inhibit[a]	To inhibit impulsive responses	10	.88
Shift[a]	To adapt to changes in routines and tasks	8	.85
Emotion control[a]	To modulate emotional reactions	10	.92
Initiate[b]	To initiate goal-oriented plans	8	.82
Working memory[b]	To hold relevant information in mind	9	.90
Plan/ Organize[b]	To plan steps and organize to solve a problem	12	.84
Organization of materials[b]	To organize belongings and materials	6	.85
Monitoring[b]	To monitor own behavior	8	.77
Behavioral Regulation Index (BRI)	To control behavior and emotions	28	.95
Metacognition Index (MI)	To solve problems in a planified and organized way	43	.95
Global Executive Composite (GEC)	Summary score of all subscales	71	.97

a. Subscales that combined form the Behavioral Regulation Index
b. Subscales that combined form the Metacognition Index

Procedure
Data were collected in home visits and through contact with caseworkers for preplacement information. Descriptive analyses and group comparisons (non-parametric Mann Whitney U) with calculation of Pearson's r as effect size were conducted with SPSS 24.

Results

Figure 1. Percentage of foster children with clinical and non-clinical scores in BRIEF subscales and indexes
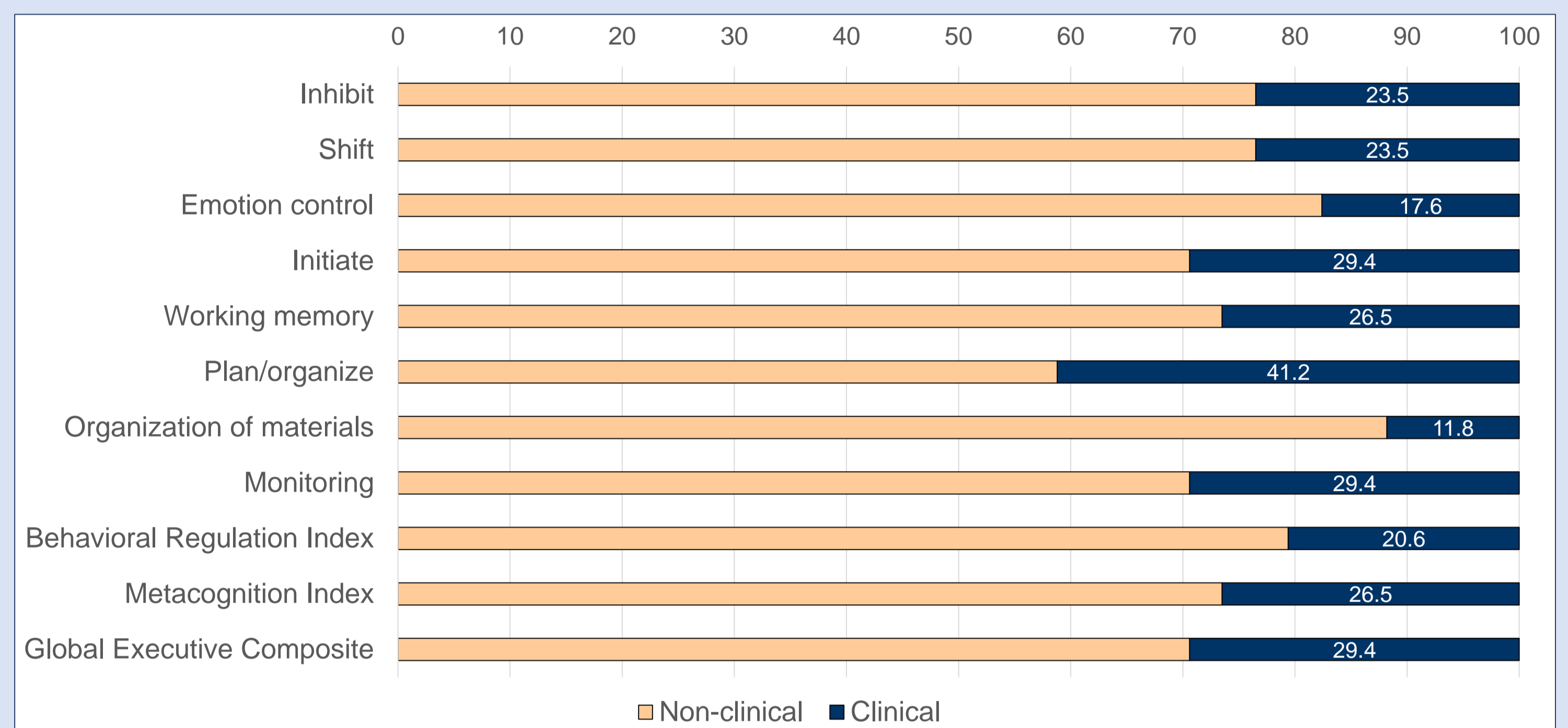

Means on adversity variables are shown in Figure 2, with non-parametric Mann-Whitney U test signification and Pearson's r effect size when it isn't negligible.

Table 2. Mean T scores and percentiles in BRIEF indexes of the whole sample

	M T (SD)	M Pc (SD)
BRI	56.94 (13.89)	65.59 (27.84)
MI	60.06 (11.78)	74.44 (24.72)
GEC	59.56 (11.77)	73.29 (22.16)

Figure 2. Comparison between foster children with clinical and non-clinical scores in Global Executive Composite on adversity variables
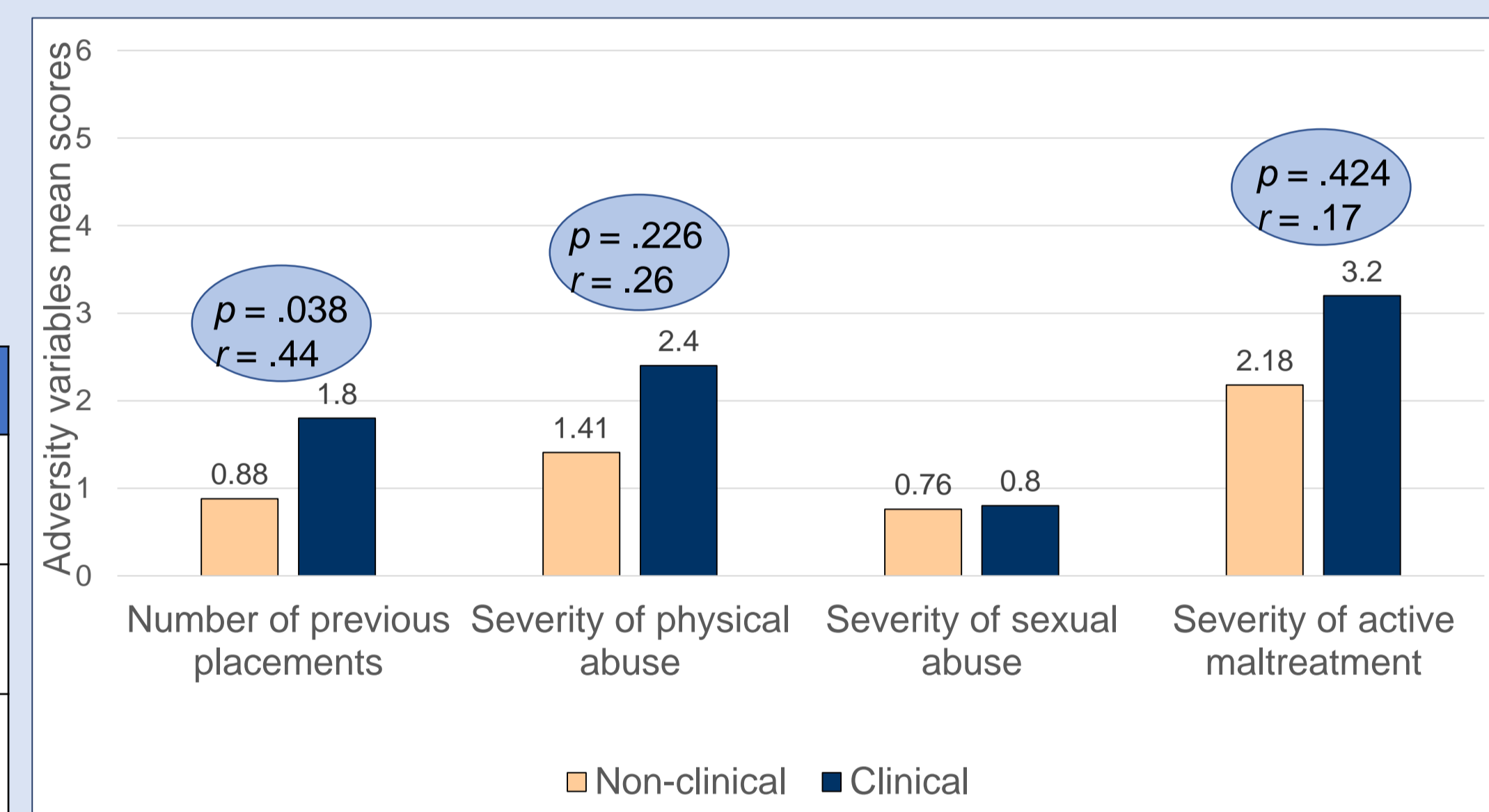
r > .10 ⟶ Small effect, r > .30 ⟶ Medium effect, r > .70 ⟶ Large effect

Conclusions

➢ Our results show that EF difficulties were not widespread across all EF areas and children. The standard scores for age group and gender reflect age-appropriate EF skills according to foster caregivers' report in behavioral regulation and less so in metacognition, although close to the clinical cut-off of 65 and around a 70th percentile.

➢ Foster children are reported to have more problems in high demanding, complex cognitive skills that load on the combination of several EF skills, as planification, initiating a plan, or monitoring their own behavior, all related to metacognition.

➢ Those foster children with clinically significant scores in the summary BRIEF score reflecting generalized self-regulation difficulties had significantly more number of previous placements than those foster children without generalized self-regulation difficulties. This result could reflect the unique deleterious effect of placement instability on self-regulation and EF skills, demonstrated in previous research with foster children controlling for confounding variables (Pears et al., 2010).

➢ A bigger sample, more detailed background data, and more sophisticated data analyses would allow to draw firmer conclusions and study in more detail the relations between early adversity and self-regulation difficulties. These are preliminary results that will be analyzed in more detail with a bigger sample and more complete information when the data collection is finished.

➢ In conclusion, it is important to enhance self-regulatory capacities in children exposed to early adversity, as they could present difficulties in complex cognitive tasks with high EF demands. As well, it should be prevented placement instability for foster children with adequate permanency planning.

References

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Acknowledgements