Supplementary Materials

Supplementary Material 1:

Table S1. Summary of treatment adaptations

Original treatment (Creswell & Willetts, 2019; Halldorsson et al., 2019; Hill et al., 2022)	Adapted treatment	Rationale for adaptation
Content		
Psychoeducation on development and maintenance of childhood anxiety	Psychoeducation on development and maintenance of childhood OCD, including information on (and alternatives to) family accommodation and reassurance provision; Externalising OCD.	Psychoeducation on OCD (including optional videos) to ensure relevant treatment content and to promote parental understanding of OCD (Chessell et al., 2022); psychoeducation on family accommodation and reassurance provision due to the association between family accommodation and childhood OCS/OCD (Chessell et al., 2021) and to enable parents to know how to respond in helpful ways to their child's OCD (Chessell et al., 2023); externalising OCD to facilitate child involvement in treatment and to promote parents and children working as a team to overcome OCD (Chessell et al., 2022).
Step-by-step exposure to feared stimuli with a focus on helping children to learn new information about their fears/worries and ability to cope in feared situations	Step-by-step exposure (with response prevention) to feared stimuli with a focus on helping children to learn new information about their fears/worries/obsessions and their ability to cope in feared situations without performing compulsions.	ERP is the gold-standard recommended psychological treatment for children with OCD (NICE, 2005).
Reading materials		

Accompanying book	Brief reading materials	Brief reading materials were developed to ensure information was concise, simple, and did not overwhelm parents (Chessell et al., 2022 and PPI). Reading materials recognised and addressed common parental concerns about parent-led treatment for OCD and incorporated case studies (with a range of OCD presentations) to ensure materials were relatable to families (Chessell et al., 2022).
Measures		
RCADS, ORS, CAIS, GBOs, SRS	ChOCI-R-P, FAS-PR, Items assessing parental knowledge/confidence, items assessing child learning, GBOs, SRS	ChOCI-R-P included to specifically track OCD symptoms; FAS-PR to monitor family accommodation across treatment; items assessing parental knowledge/confidence were included as parents commonly feel ill-equipped to support their child at the start of treatment (Allard et al., 2022; Chessell et al., 2022); items assessing child learning to help enhance exposures (Craske et al., 2014).

Note. RCADS = Revised Child Anxiety and Depression Scale; ORS = Outcome Rating Scale; CAIS = Child Anxiety Interference Scale; GBOs = Goal Based Outcomes; SRS = Session Rating Scale; ChOCI-R-P = Children's Obsessive Compulsive Inventory – Revised – Parent report; FAS-PR = Family Accommodation Scale – Parent Report; PPI = Patient and Public Involvement.

Supplementary Material 2:

Table S2. Treatment content

Session	Content	Between-session tasks
1 (Videocall, 1 hour)	Psychoeducation on OCD, including the development and maintenance of OCD. Identification of 3 goals.	Prior to session 1, read Section 1 of the reading materials. After session 1, complete maintenance of OCD handout; discuss and refine treatment goals with child; read Section 2 of reading materials.
2 (Videocall, 1 hour)	Externalising OCD; rehearsal of skills on how to talk to their child about OCD to identify what their child needs to learn to overcome OCD. Identifying rewards.	Discuss externalising OCD with child; use questioning skills to identify what child needs to learn to overcome OCD; identify rewards with child; read Section 3 of reading materials.
3 (Videocall, 1 hour)	Development of provisional step-by-step (ERP) plan to work towards one treatment goal. Step-by-step ERP plans gradually progressed from easier to harder ERP tasks (as perceived by the parent/child).	Discuss and refine step-by-step plan with child. Implement step 1 of the plan; read Section 4 of the reading materials
4 (Telephone/ videocall, 30 minutes)	Review of step-by-step plan	Continue implementing step-by-step with child; read Section 5 of the reading materials.
5 (Videocall, 1 hour)	Review of step-by-step plan; worked example of problem solving	Continue implementing step-by-step with child; use problem solving approach with child if applicable. If session 6 is final session, read Section 6 of reading materials
6 (Telephone/ videocall, 30 minutes)	Review of step-by-step plan; review of problem solving. If final session, relapse prevention plan developed.	Continue implementing step-by-step plan with child. If session 7 is final session, read Section 6 of reading materials
7 (if needed, telephone/ videocall, 30 minutes)	Review of step-by-step plan. If final session, relapse prevention plan developed	Continue implementing step-by-step plan with child. If session 8 is final session, read Section 6 of reading materials
8 (if needed, telephone/ videocall, 30 minutes)	Review of step-by-step plan; relapse prevention plan developed	Continue implementing treatment techniques where necessary.

Supplementary Material 3:

Further information on specific study measures.

Screening Questionnaire. The screened questionnaire collected data regarding parent/child demographic characteristics, confirmation of UK-residency, prescribed psychotropic medication, current/previous psychological support, confirm autism diagnosis/learning disability, and brief questions to determine whether the child may be experiencing obsessions and/or compulsions.

Items assessing parents' knowledge and confidence to help their child to overcome OCD. Based on the findings of [reference blinded for peer-review] we administered 3 items to assess the effects of the parent-led intervention on parents' knowledge and confidence to help their child to overcome OCD. Parents were asked to complete the following items to reflect their experiences over the past week: (1) *I have learned new information about my child's OCD,* (2) *I have learned new information about how to help my child to overcome OCD,* (3) *I feel confident in my ability to help my child to overcome OCD,* on a 5-point scale from 1 (*I have learned no new information about my child's OCD/how to help my child to overcome OCD/I do not feel confident in my ability to help my child overcome OCD*) to 5 (*I have learned a lot of new information about my child's OCD/how to help my child overcome OCD/I feel very confident in my ability to help my child to overcome OCD*).

Items assessing children's learning about their fears and their ability to cope in feared situations. Given that this treatment was designed to create opportunities for children to learn new information about their fears and their ability to cope in feared situations without performing compulsions, parents were asked to complete the following items after each treatment session, with reference to the past week: (1) *My child has learned new information about their fears/worries/obsessions (e.g., information about the probability of their*

fears/worries/obsessions happening, or how bad it would be if their fears/worries/obsessions came true), and (2) *My child had learned new information about their ability to cope in feared situations*, both on a 5-point scale from 1 *(no new learning)* to 5 *(a lot of new learning)*.

Post-treatment questionnaire. Six questions (i.e., '*Overall, I am satisfied with the treatment I received', 'I am satisfied with the number of treatment sessions I received', 'I am satisfied with the length of the treatment sessions I received', 'I am satisfied with the outcomes of the treatment I received', 'This treatment has equipped me to help my child to overcome OCD', 'I would recommend this treatment approach to other families'.*) were assessed on a 5-point scale from *strongly disagree* to *strongly agree*. Four open ended questions invited parents to comment on the aspects of the treatment they liked, disliked, suggestions for improvement, and any other feedback.

Session Rating Scale (SRS; Miller et al., 2000). The SRS measures the therapeutic alliance, specifically (1) therapeutic relationship, (2) topics covered, (3) therapeutic approach, and (4) overall satisfaction. It requires respondents to indicate their experience of a therapeutic interaction along four 10cm lines (i.e., a visual analogue scale), producing a total score out of 40 (where higher scores indicate a better therapeutic alliance and scores <36 indicate a problematic therapeutic alliance, Duncan et al., 2003). To ensure suitability for online completion, parents were asked to indicate their experience of each treatment session along a 10-point Likert scale.

Supplementary Material 4

Visual analyses of ChOCI-R-P symptoms for each participant (including level, trend, variability, observed and projected values, percentage of non-overlapping data [PND]).

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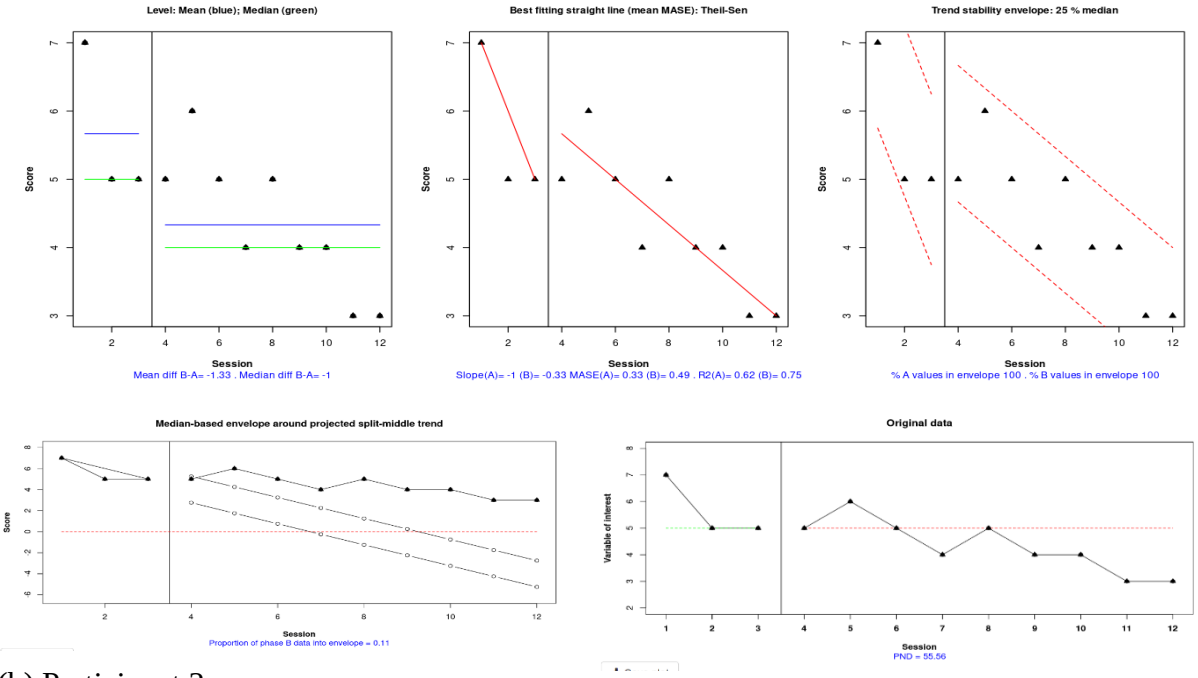

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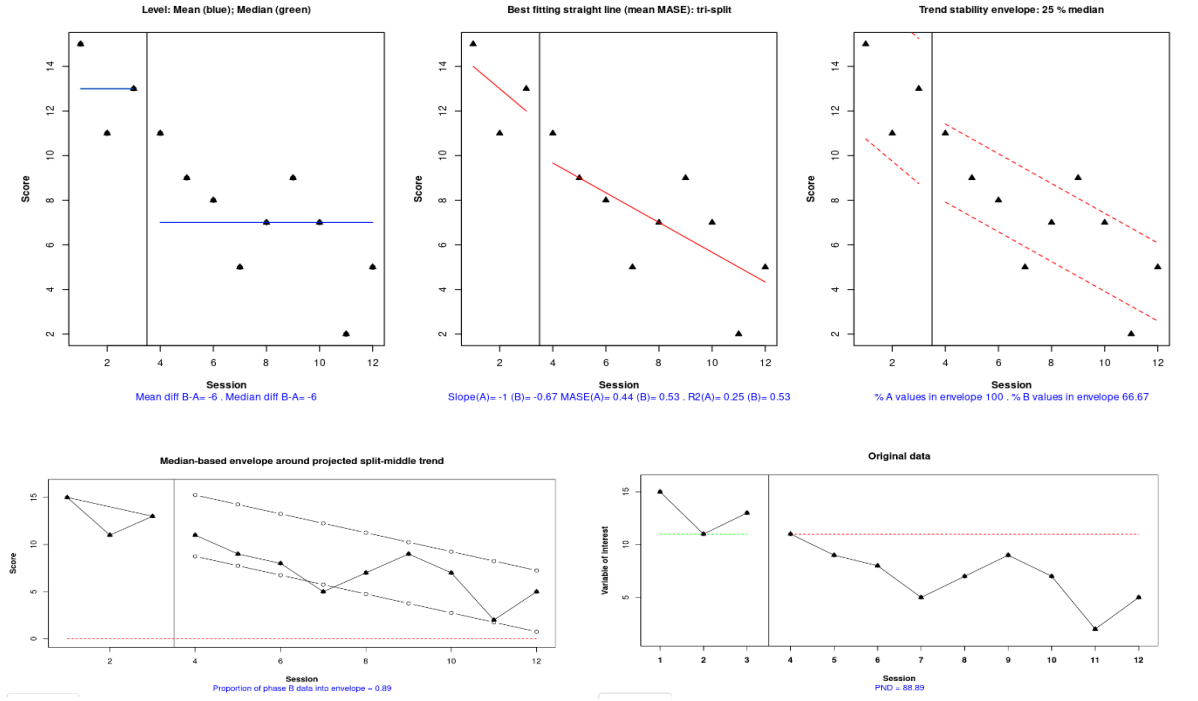

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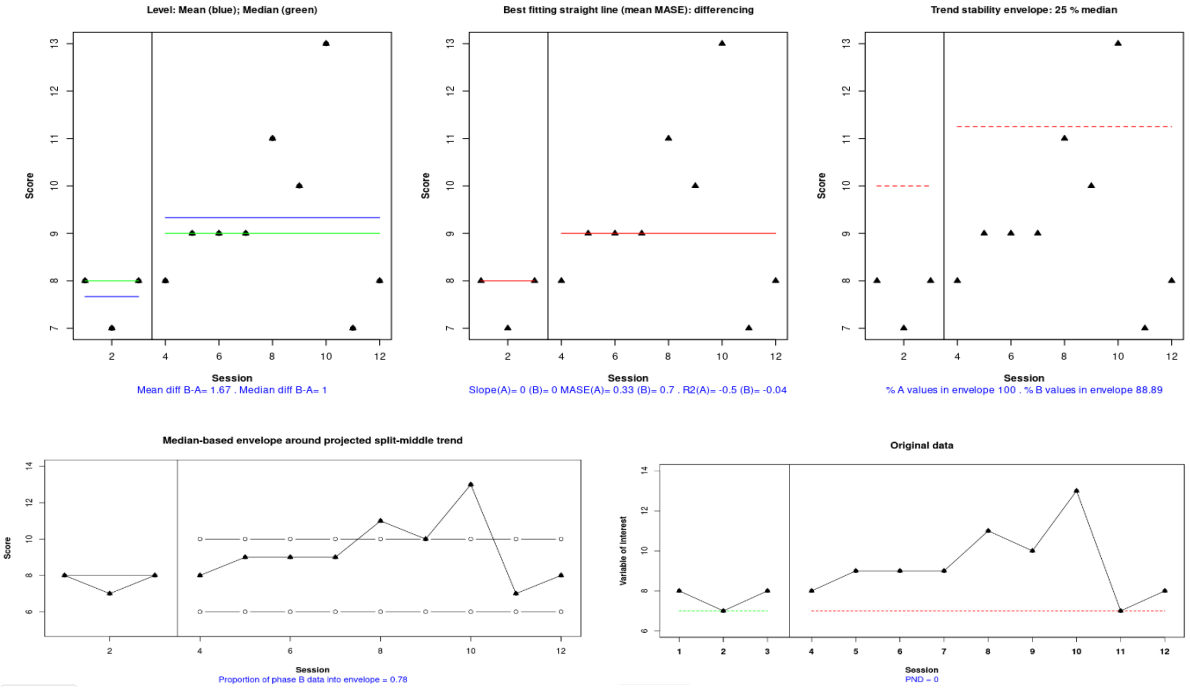

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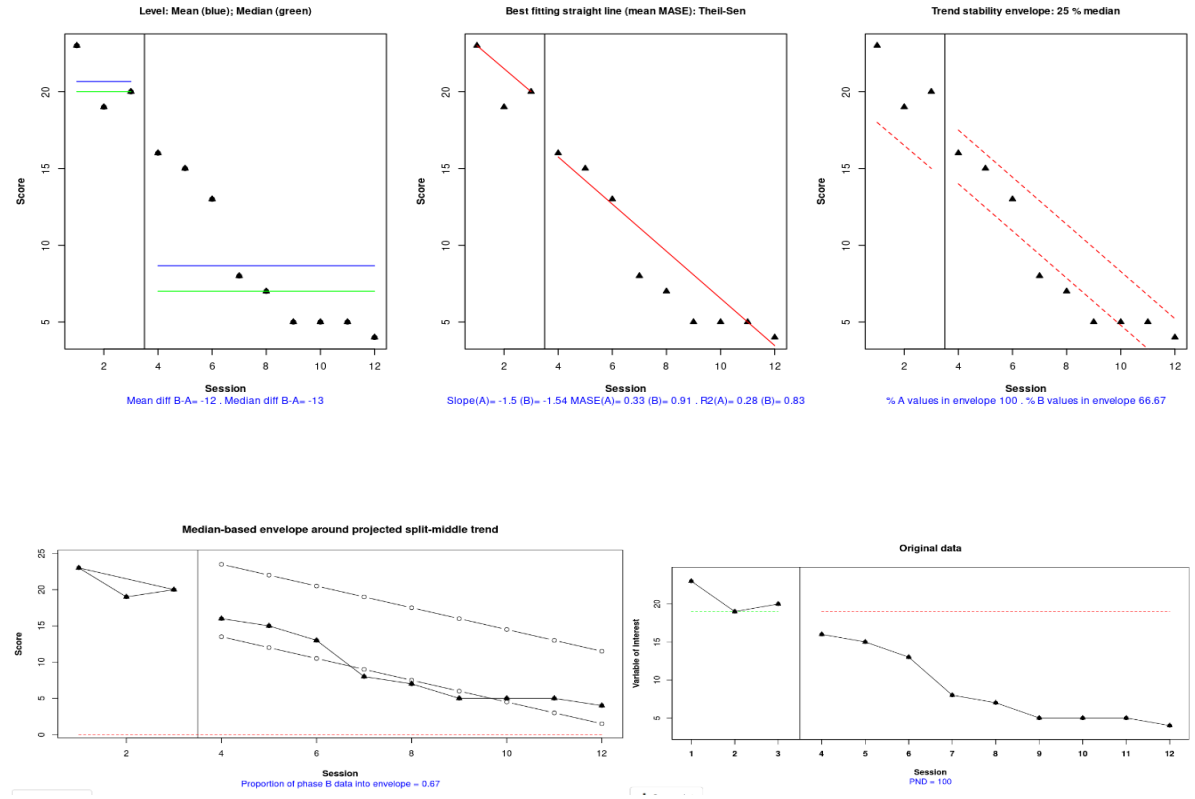

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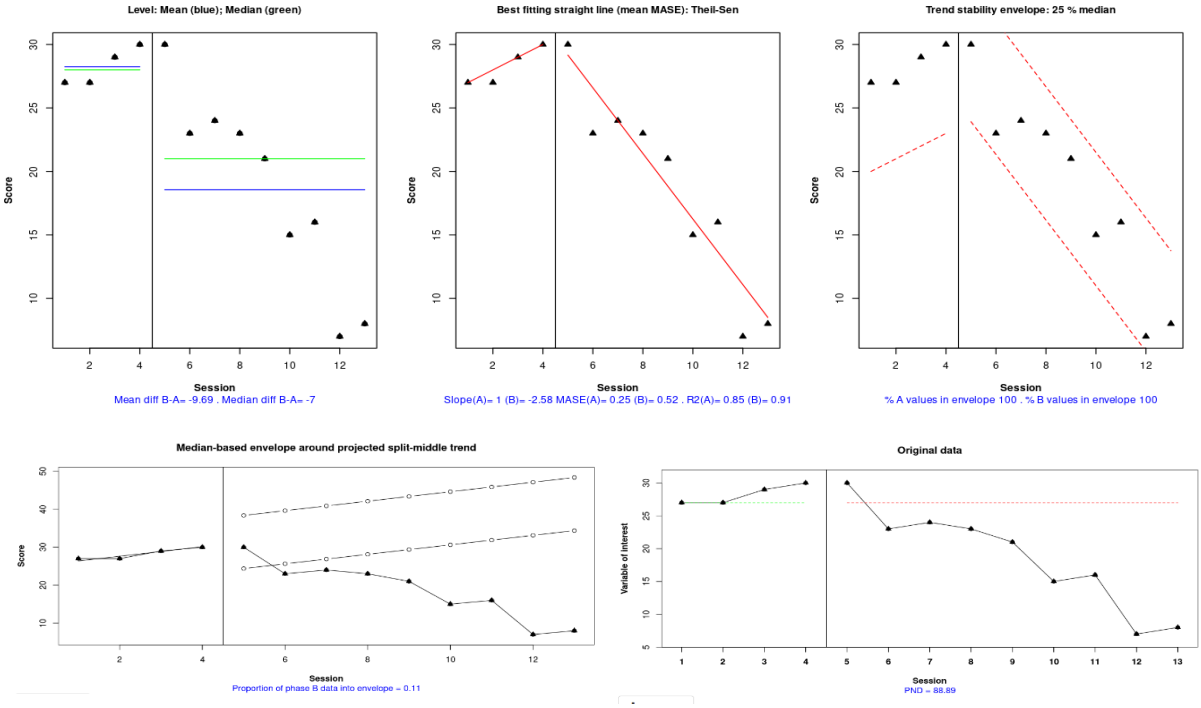

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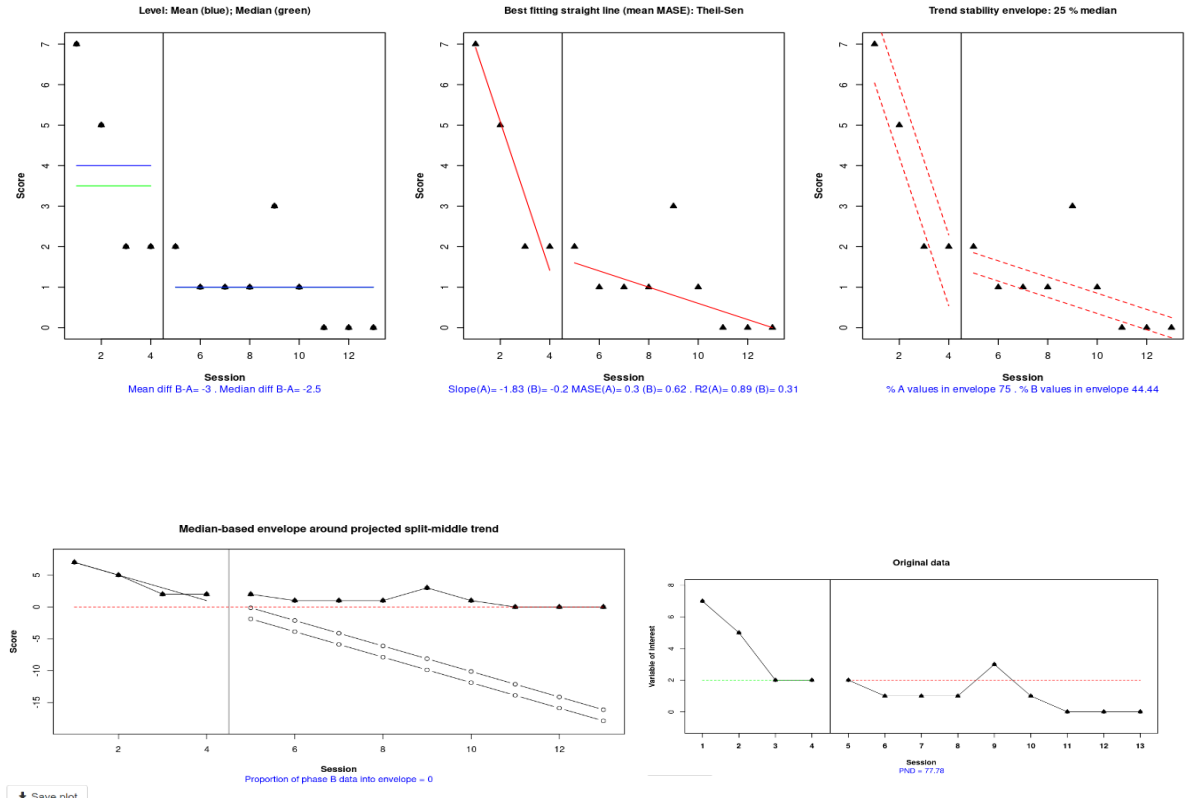

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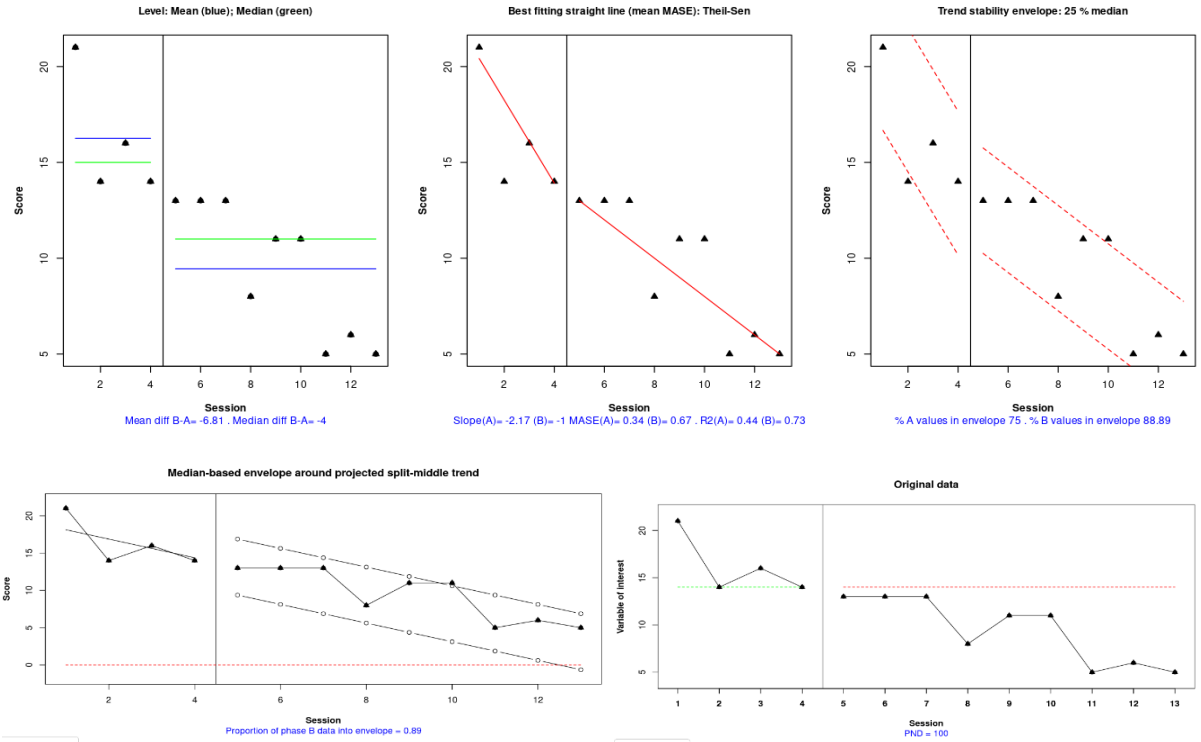

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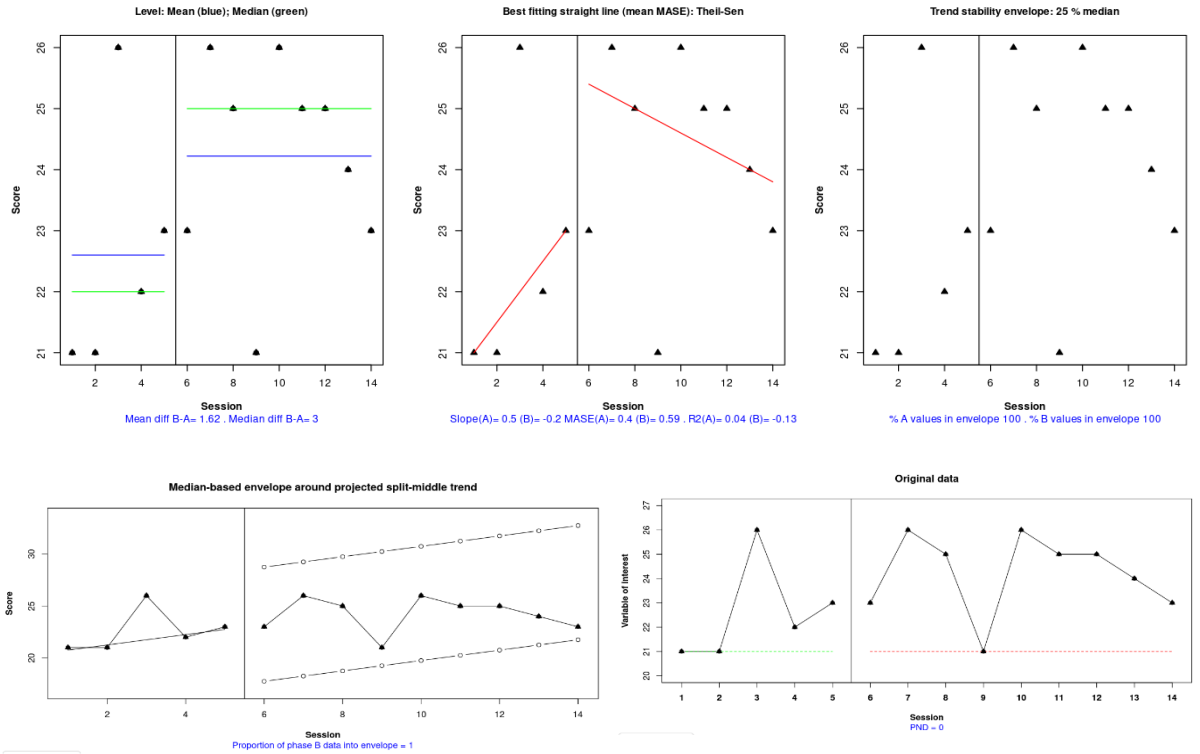

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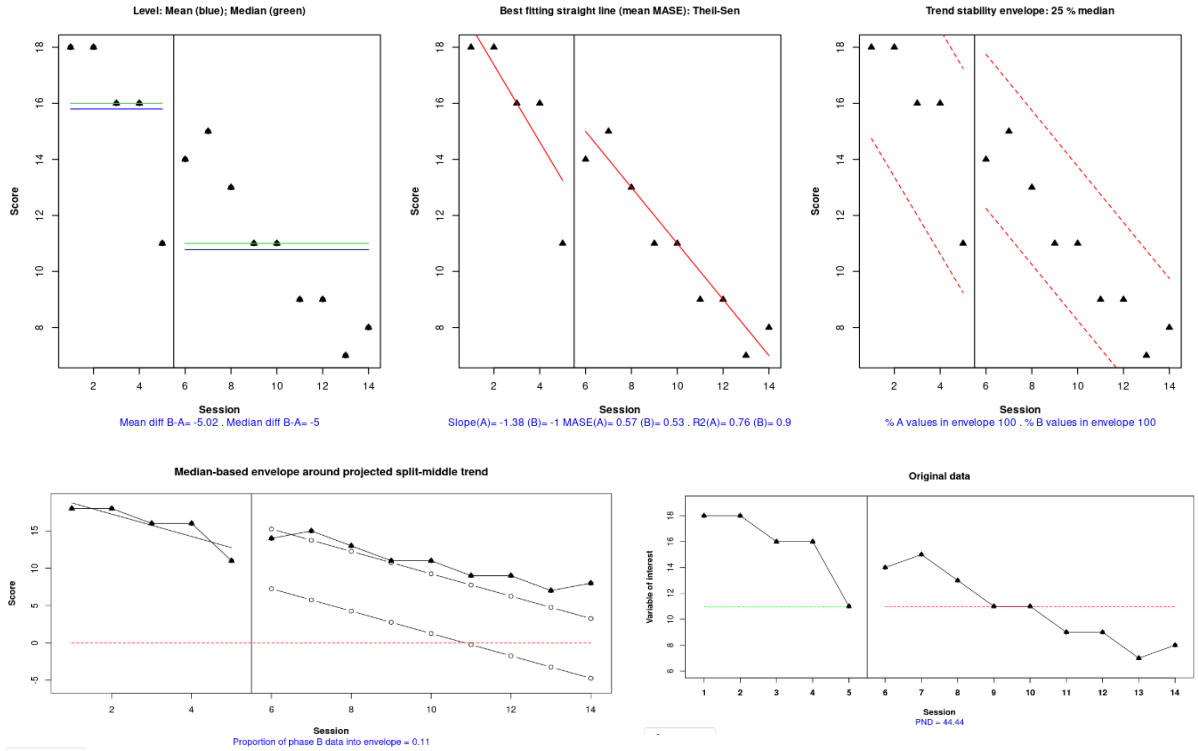

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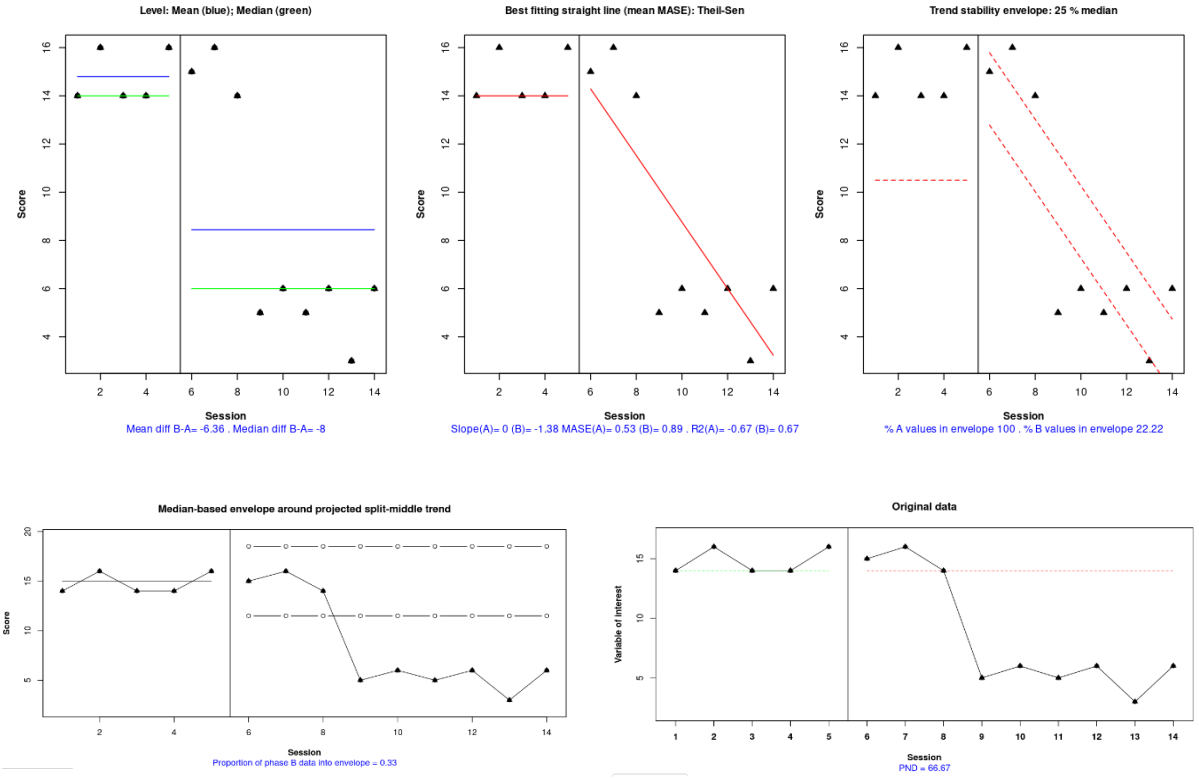

Visual analyses of ChOCI-R-P impairment for each participant (including level, trend, variability, observed and projected values, percentage of non-overlapping data [PND]).

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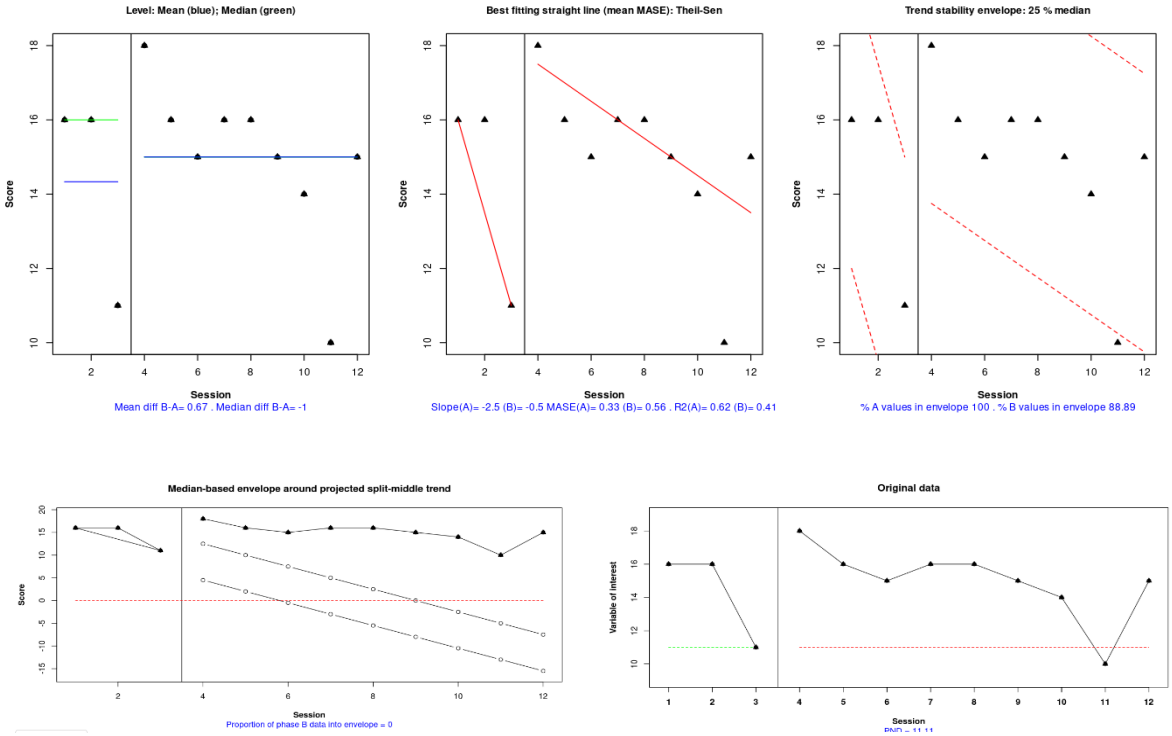

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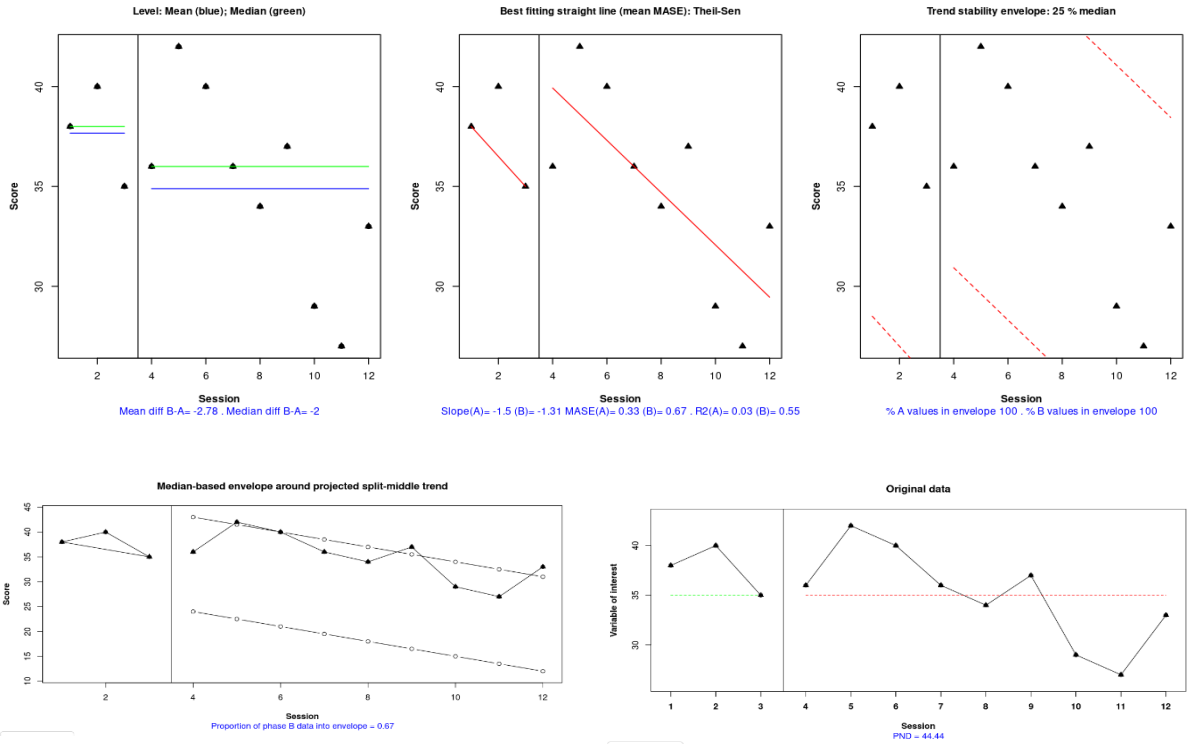

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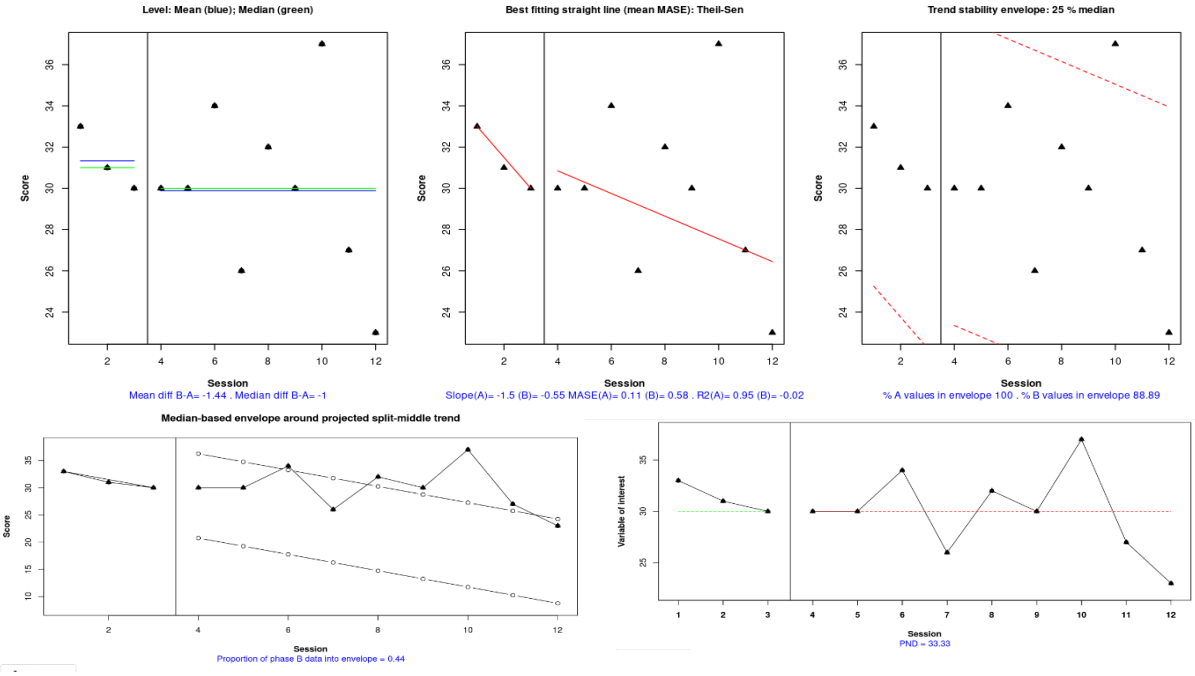

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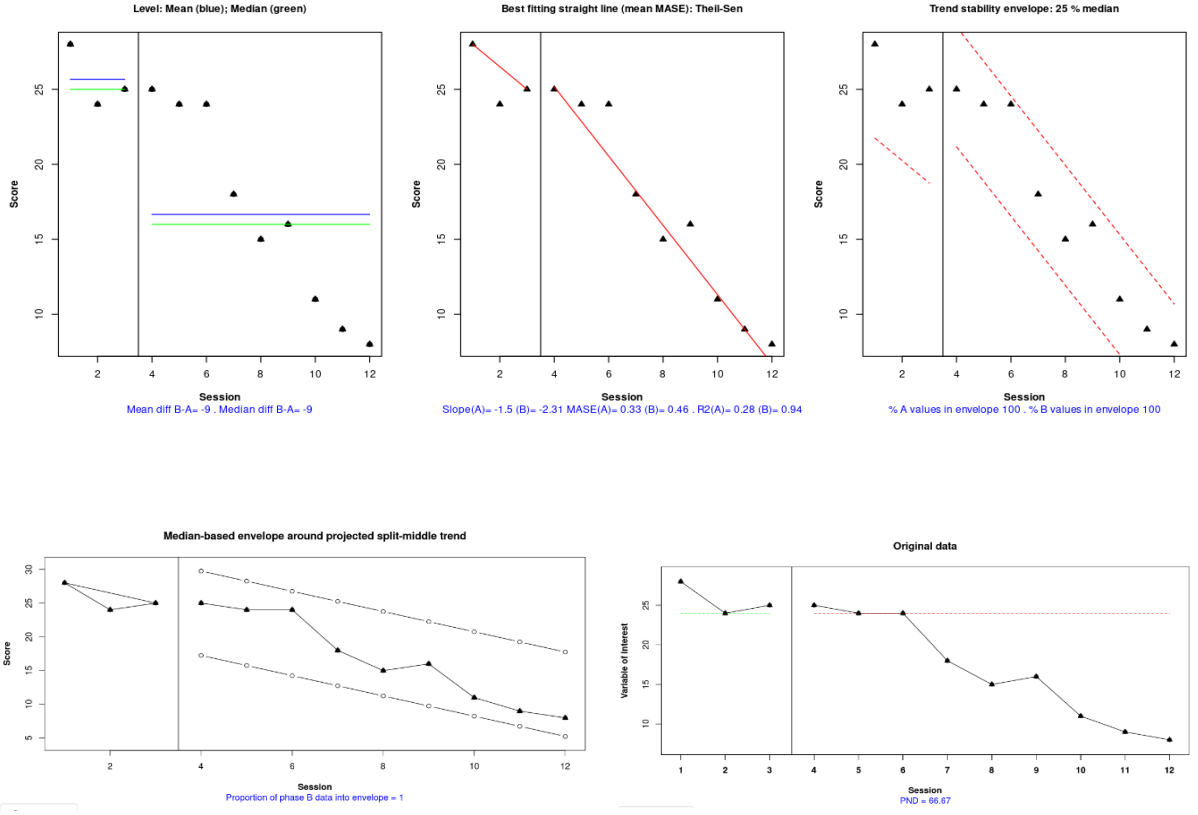

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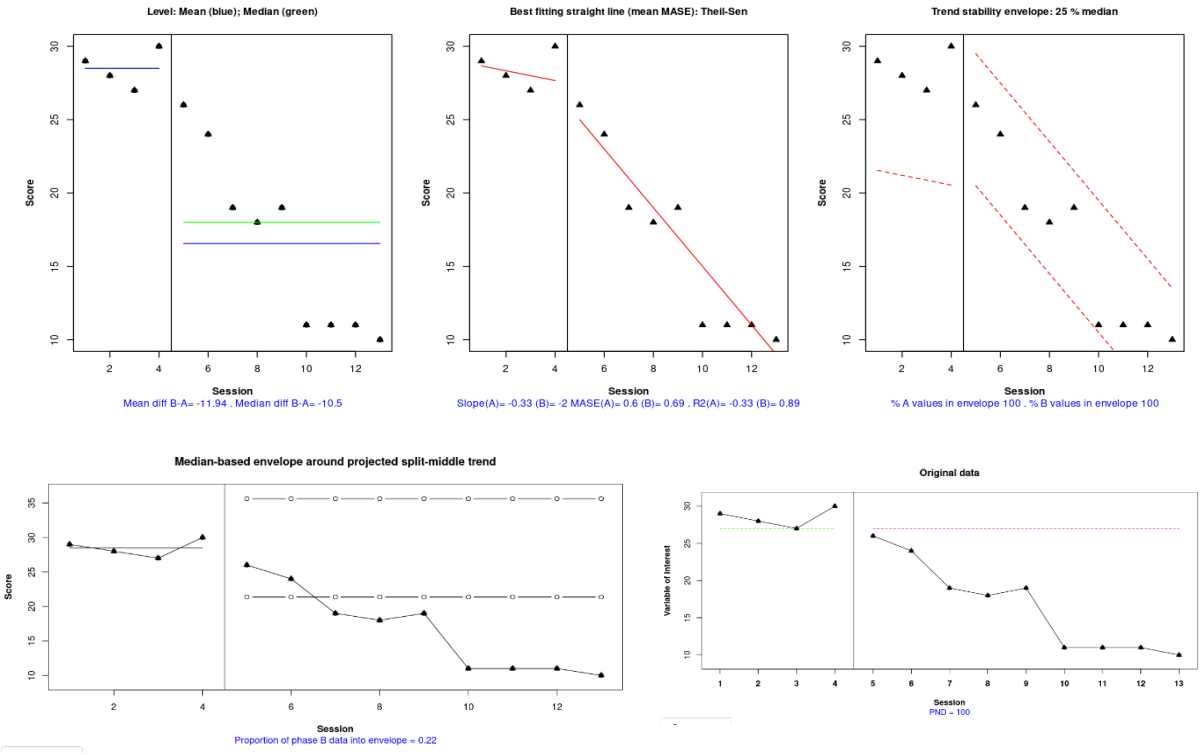

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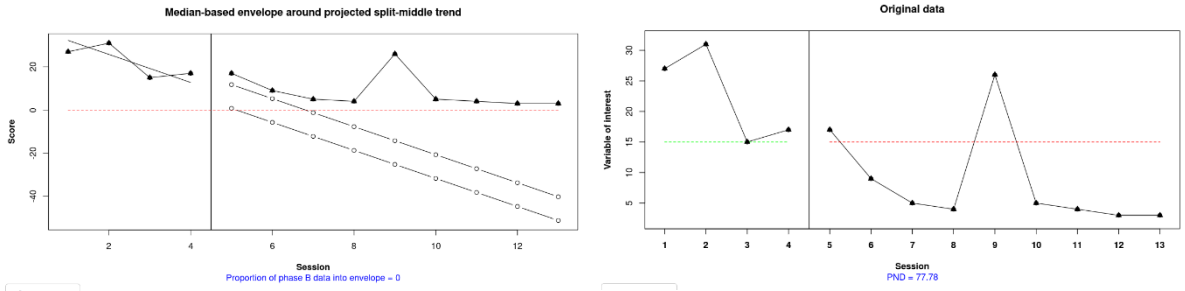
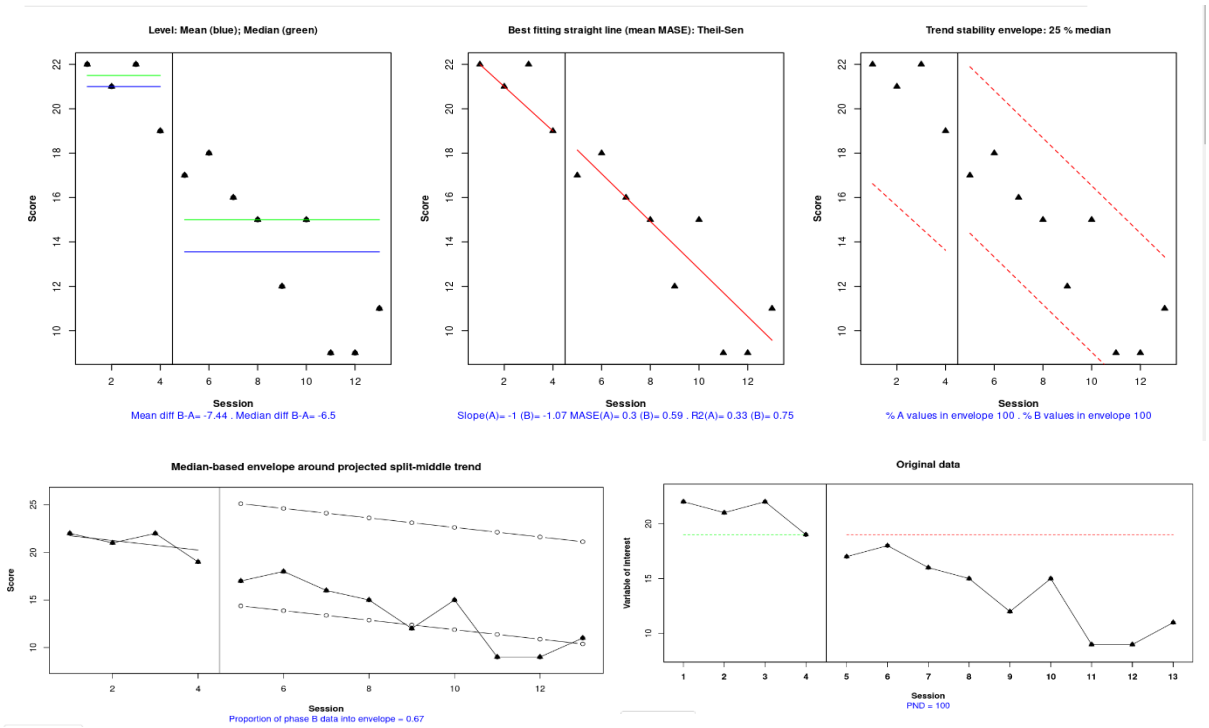


[1] Mean, trend, and data stability were assessed by eye for this participant, as this data could not be analysed in https://manolov.shinyapps.io/Overlap/

(g) Participant 7



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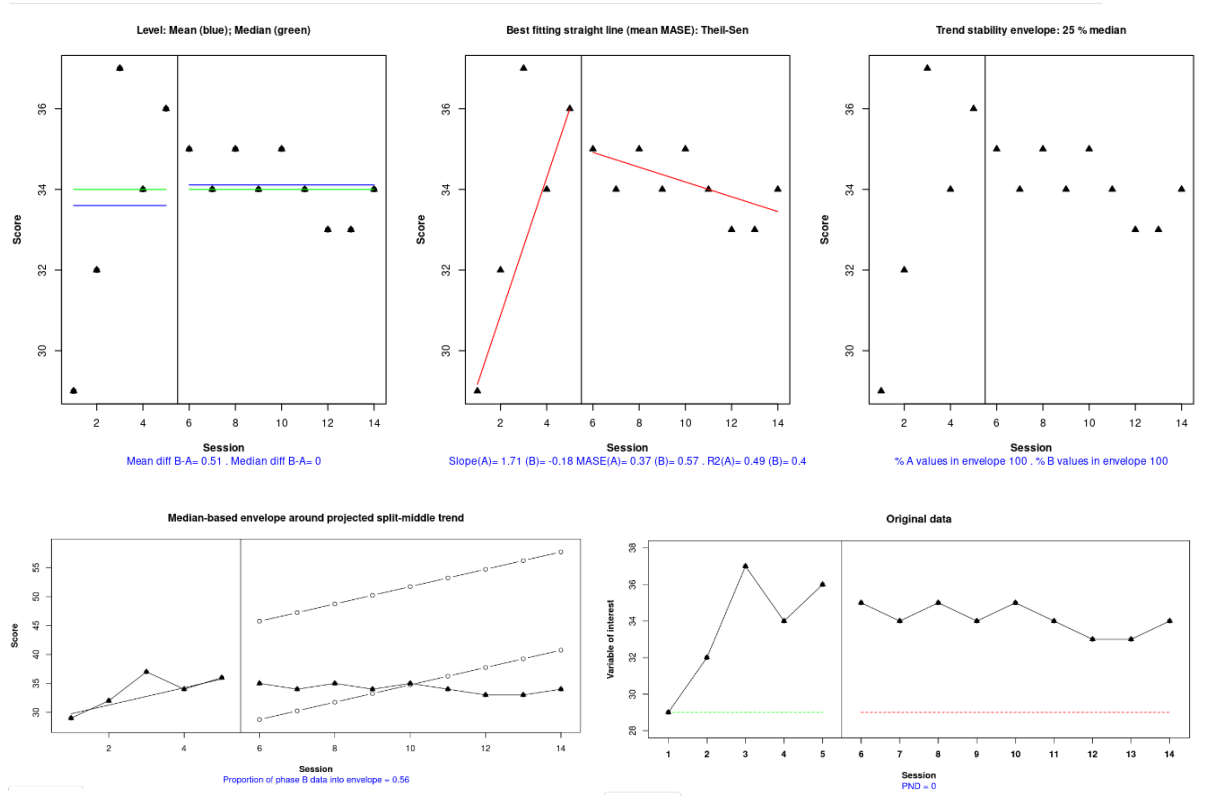

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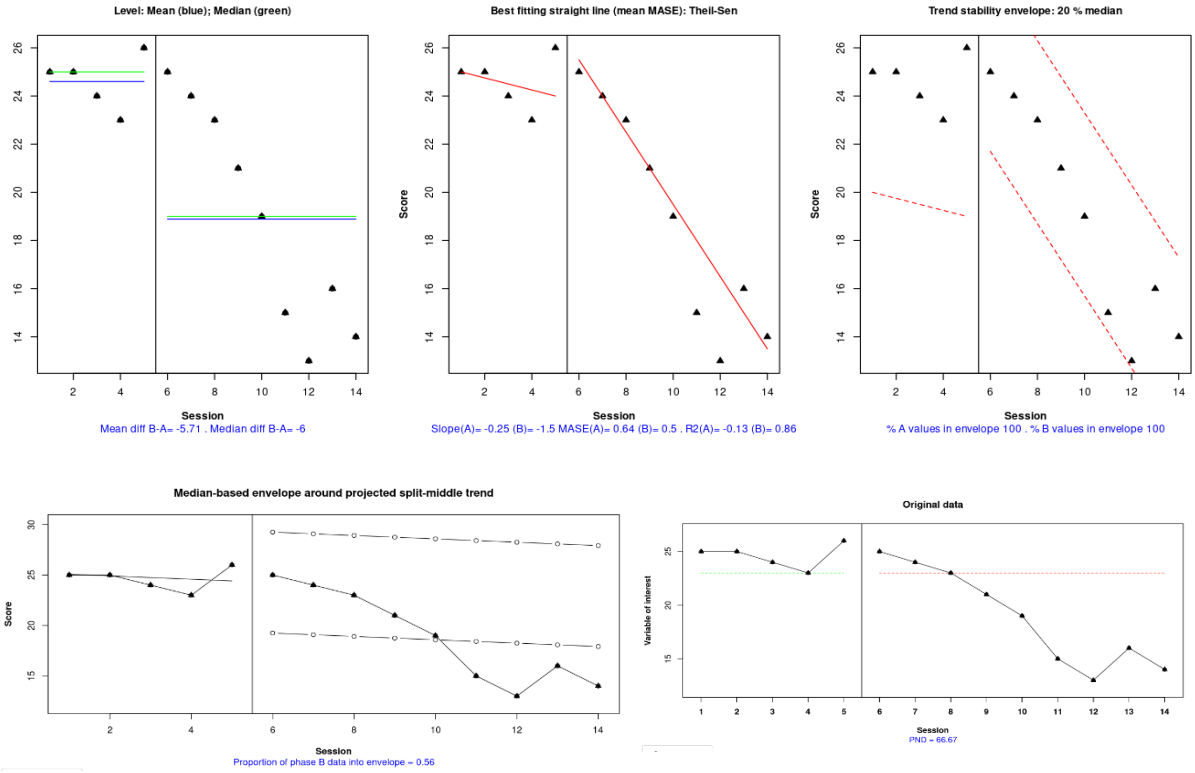

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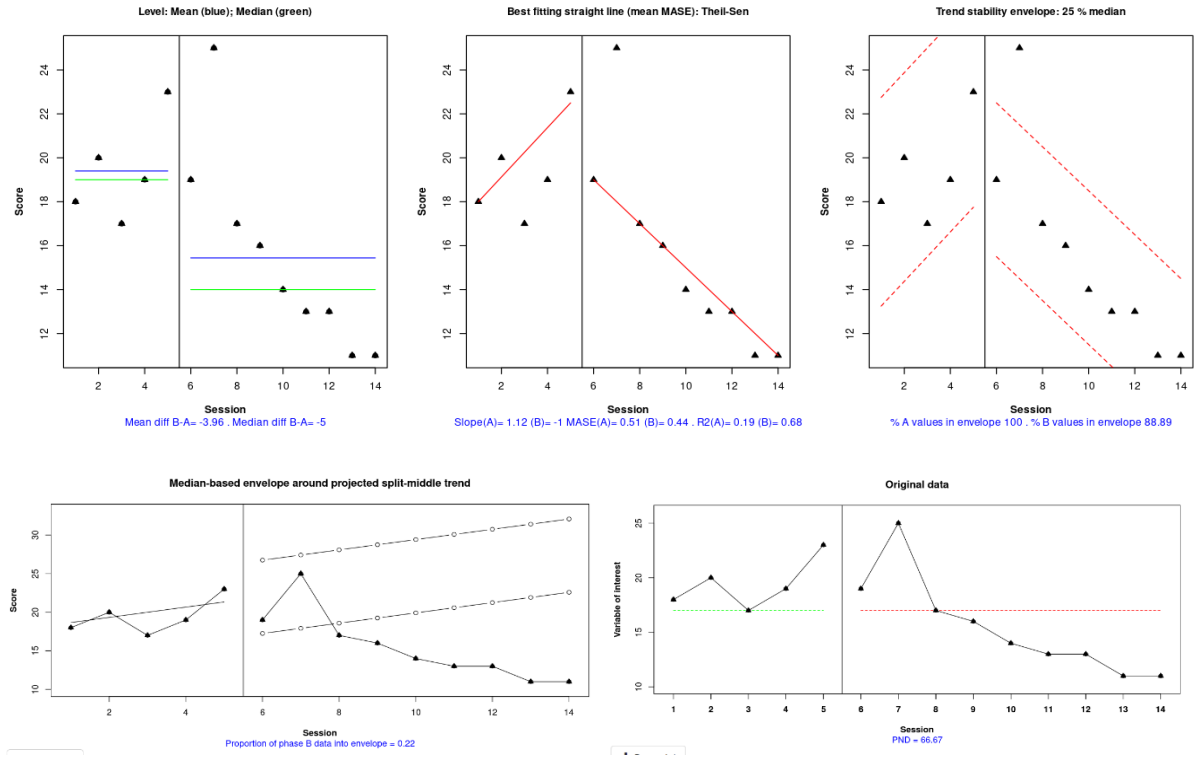

Visual analyses of FAS-PR for each participant (including level, trend, variability, observed and projected values, percentage of non-overlapping data [PND]).

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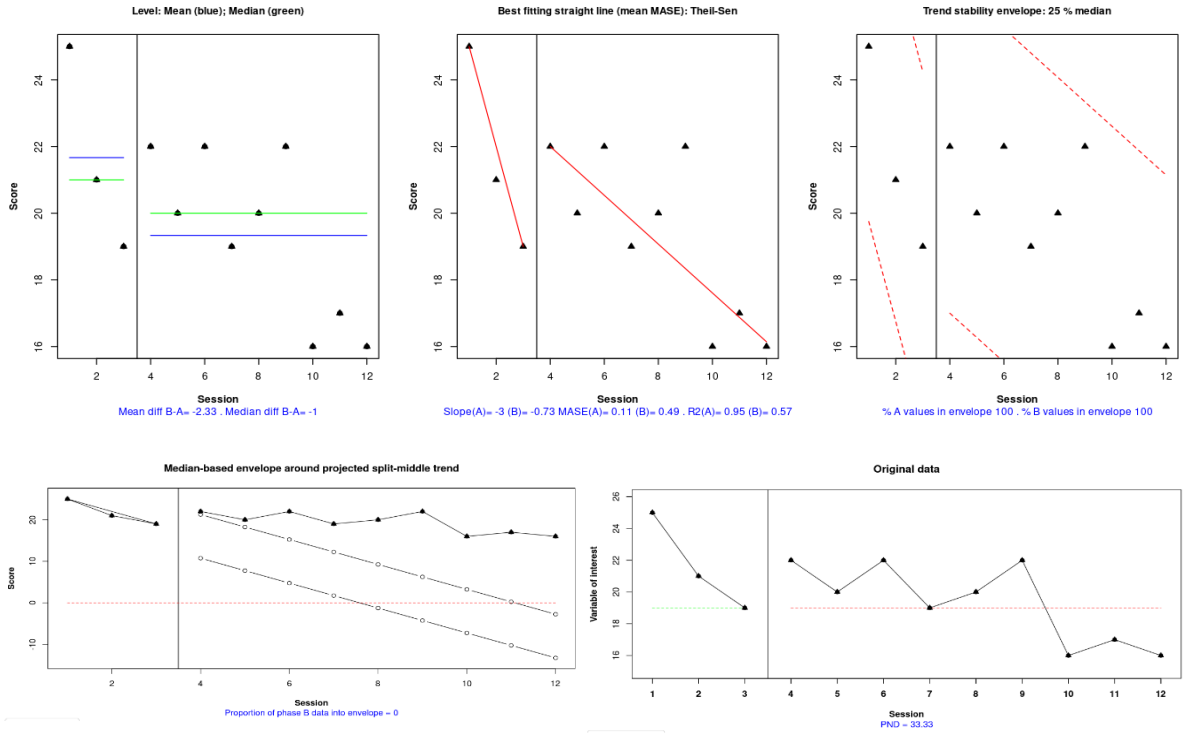

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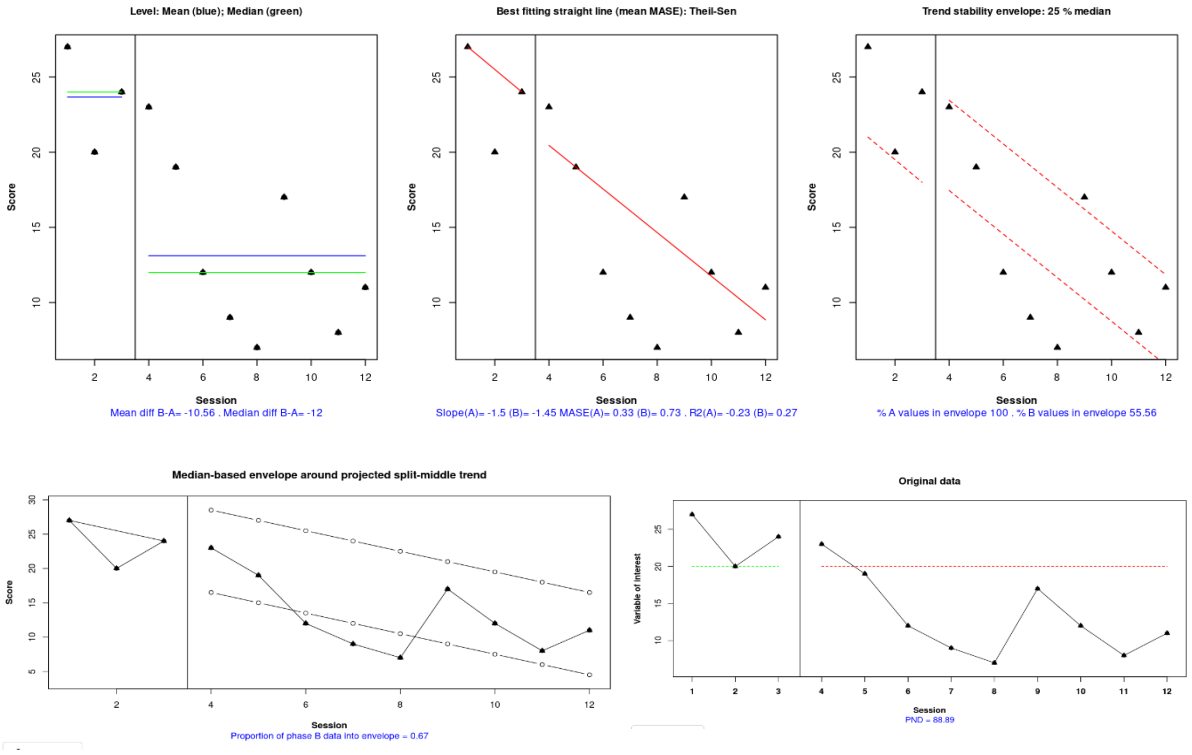

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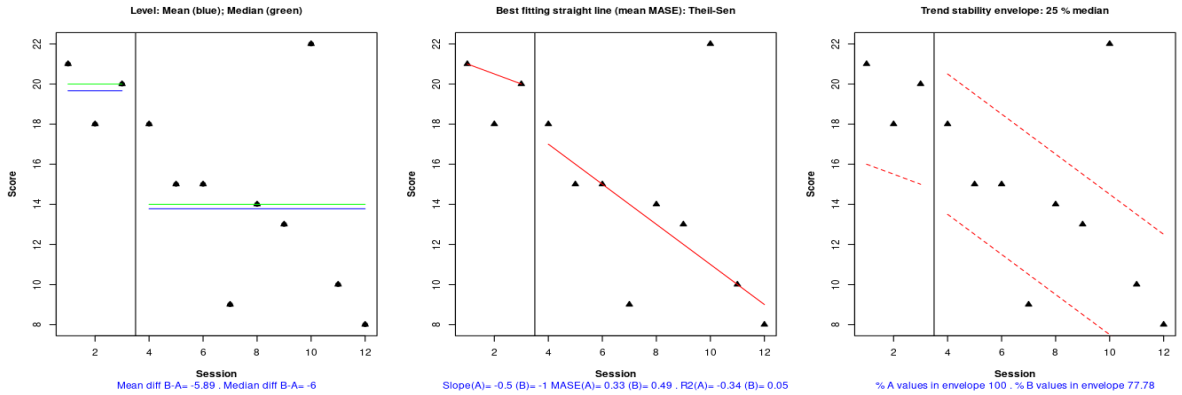

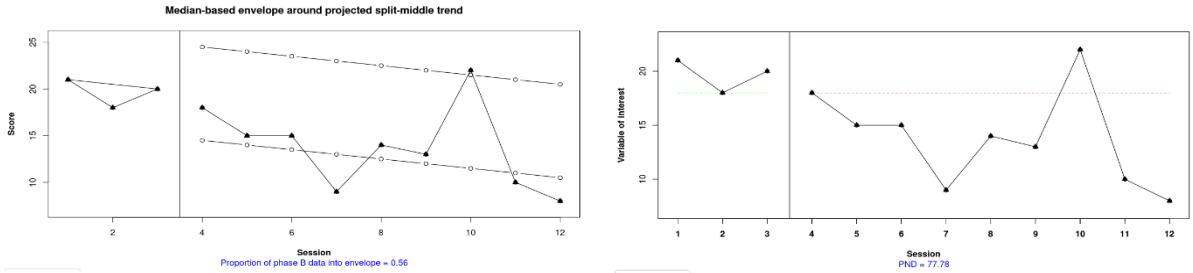

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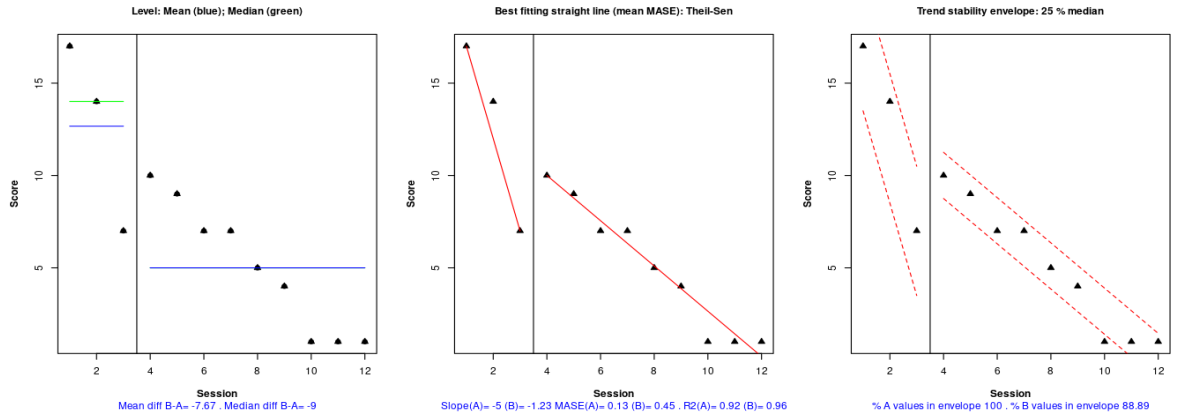

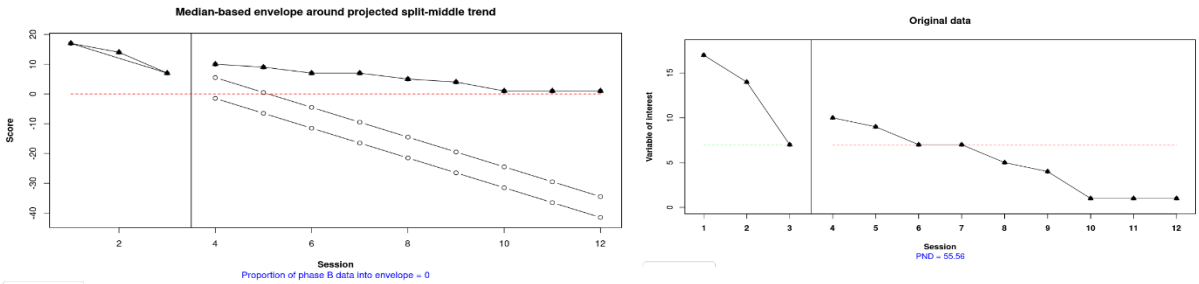

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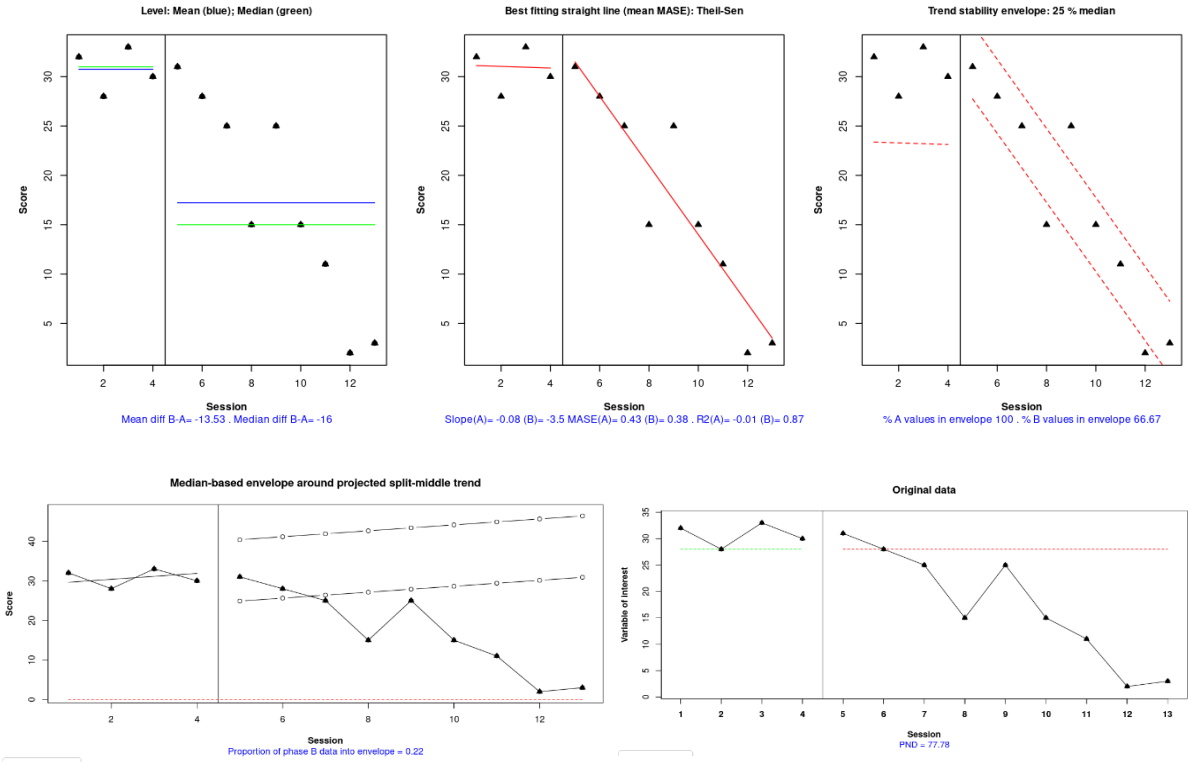

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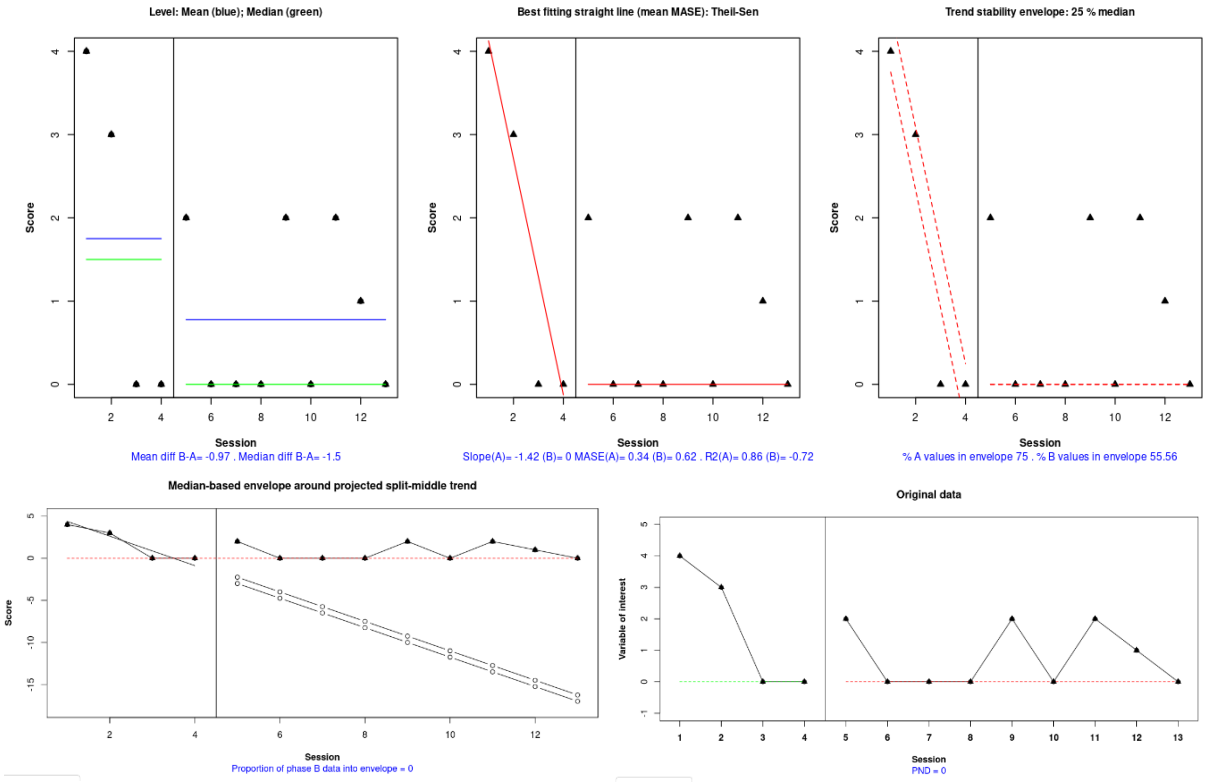

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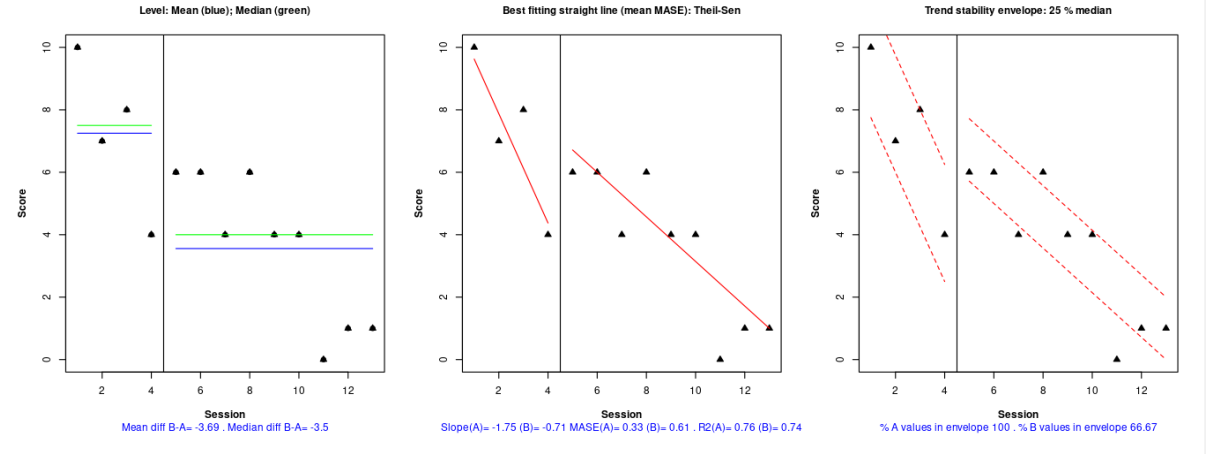

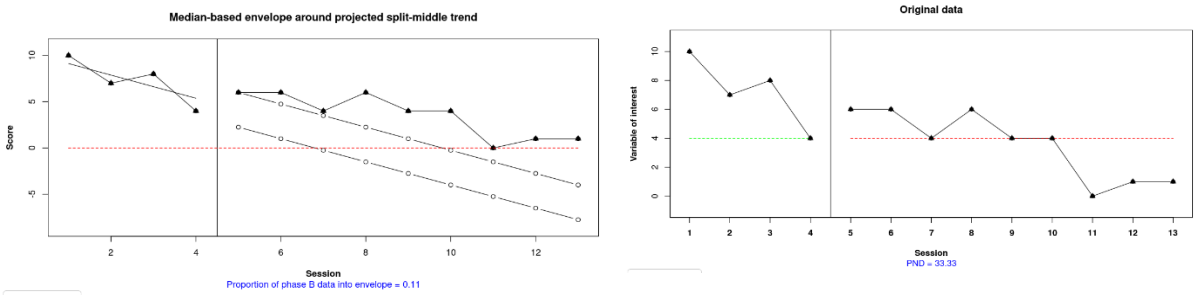

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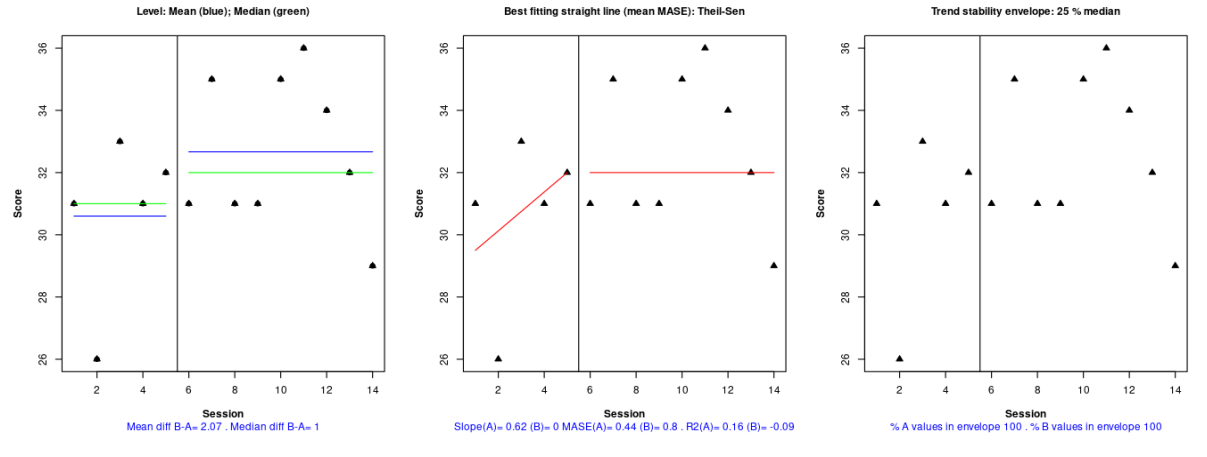

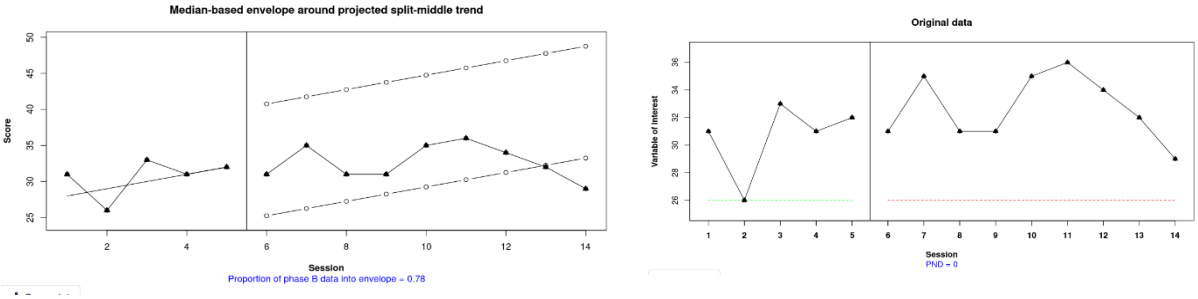

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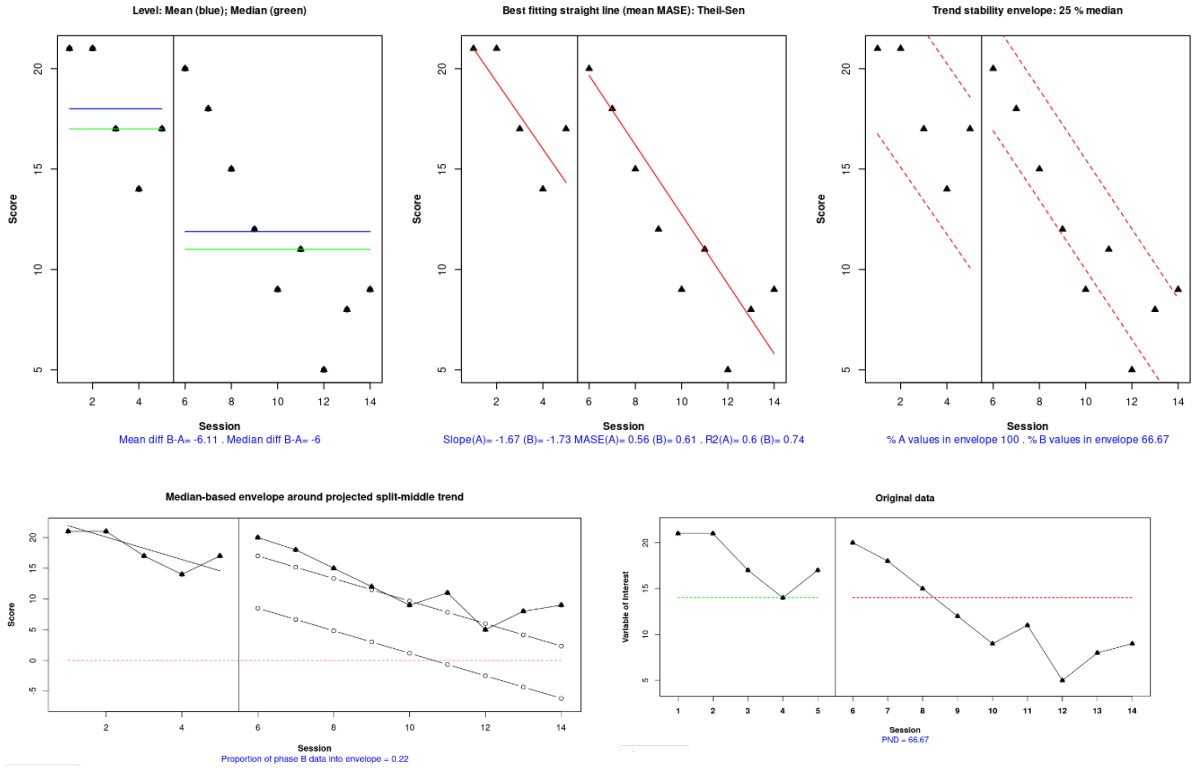

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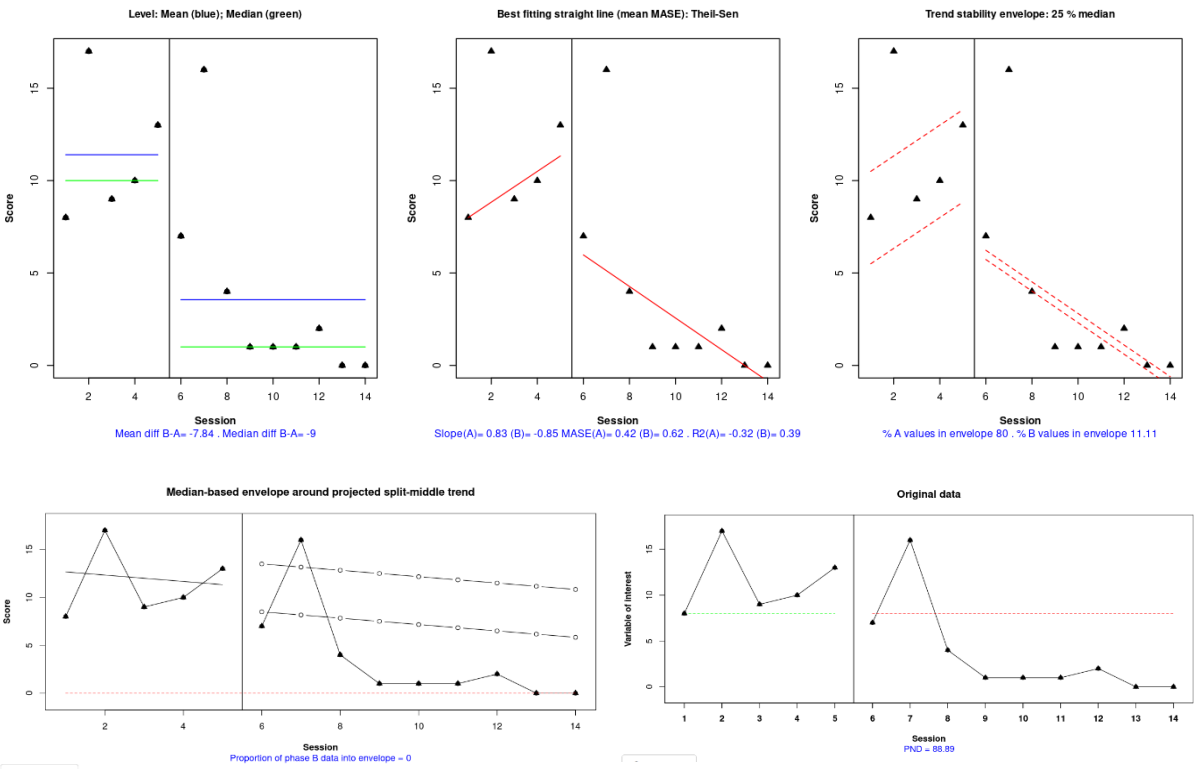


Supplementary Material 5

Supplementary analyses: Items assessing parents' knowledge and confidence to help their child to overcome OCD, children's learning about their fears and their ability to cope in feared situations, and treatment acceptability data.

Missing data

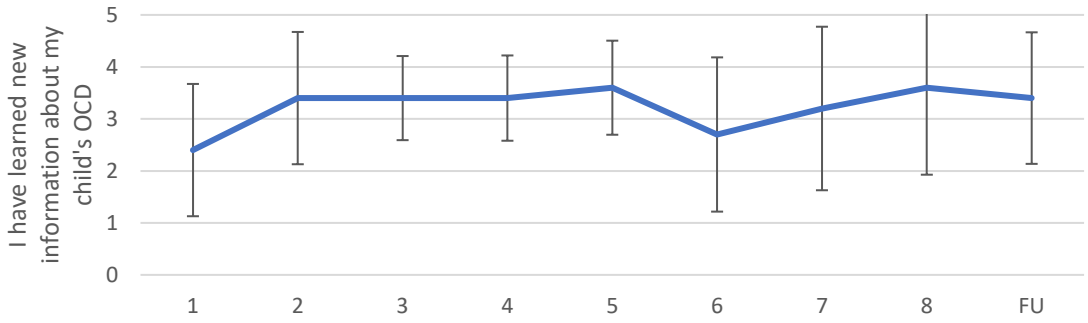
One participant (P4) had missing SRS data for two treatment sessions and only eleven (of fifteen) parents completed the post-treatment acceptability questionnaire. Analyses were based on available data.

Items assessing parents' knowledge and confidence to help their child to overcome OCD

Averaged parental responses to items assessing their knowledge and confidence to help their child to overcome OCD are shown in Figure 1. Parents learned the most new information about their child's OCD from session two to five, and session eight, corresponding to the sessions where the main treatment content and information on relapse prevention was delivered. Similarly, parents consistently learned the most new information about how to help their child to overcome OCD from session three to the follow-up appointment, mirroring the introduction and monitoring of ERP tasks. Notably, parents consistently reported learning a reasonable amount of new information about their child's OCD and how to help their child across treatment sessions (with the majority of treatment session means >3 out of 5). Parents' confidence to help their child also gradually increased across the treatment.

Figure 1. Items assessing whether parents have learned new information about their child's OCD, whether parents have learned new information about how to help their child to overcome OCD, and parents' confidence in their ability to help their child to overcome OCD.

(a)



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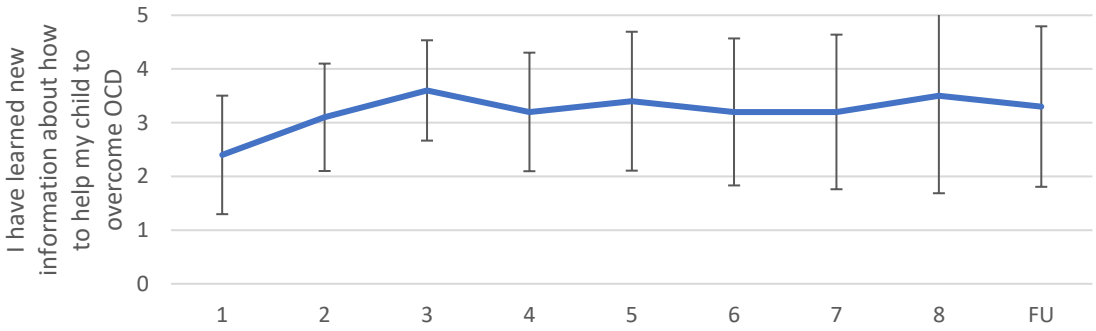

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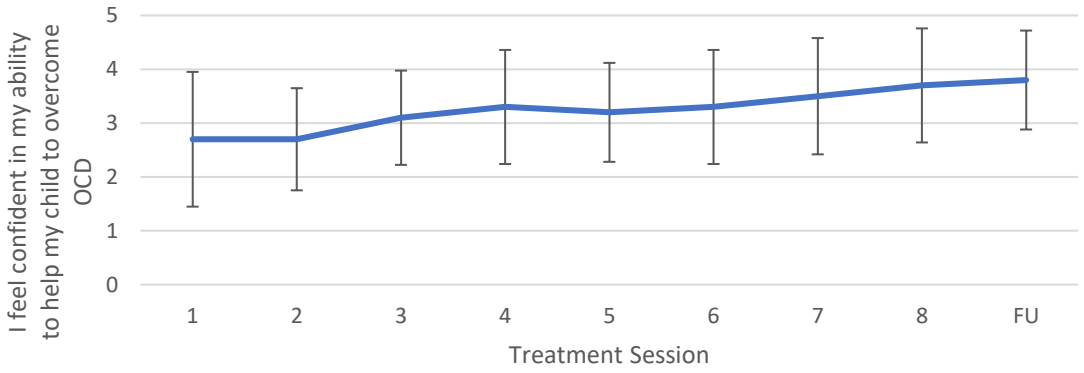


Note. Error bars represent the standard deviation for each treatment session score.

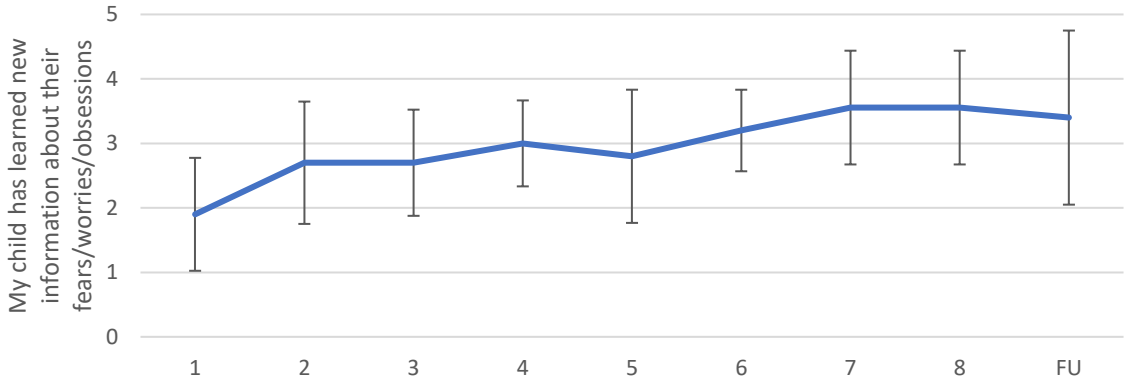
Items assessing children's learning about their fears and their ability to cope in feared situations.

Averaged parental responses to items assessing children's learning about their fears and their ability to cope in feared situations are shown in Figure 2. Parents reported that their

children gradually learned new information about their fears and their ability to cope in feared situations as the treatment progressed – however, this slightly subsided at the follow-up.

Figure 2. Items assessing whether children have learned new information about their fears and their ability to cope in feared situations.

(a)



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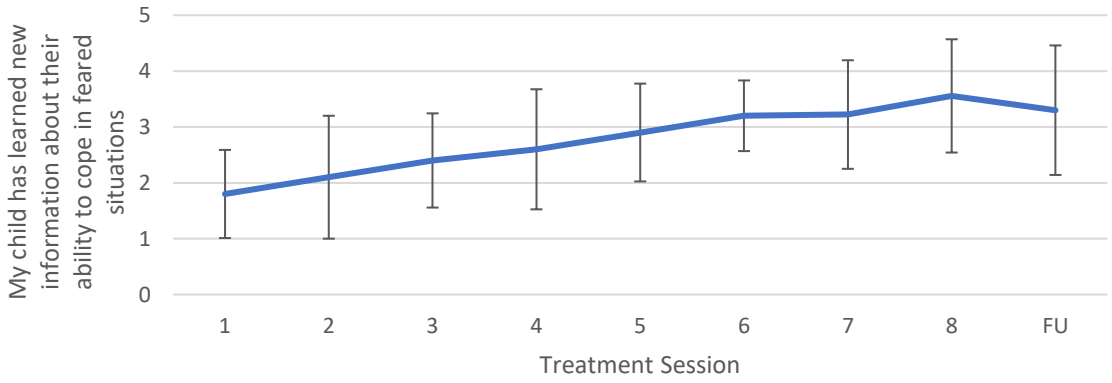

Note. Error bars represent the standard deviation for each treatment session score.

Treatment Acceptability

Session Rating Scale (SRS). Parents' average total SRS scores across all treatment sessions (M=38.7, SD=2.8) and each individual treatment session were above the cut-off of 36, indicating that the treatment was broadly acceptable to parents. However, parents' total SRS scores ranged from 28 to 40 across treatment sessions, with one parent's total scores

consistently below the cut-off for each treatment session (M=31.8, SD=1.8, Range=28-34) and another parent's total scores were below the cut-off for the first treatment session, suggesting that the treatment/particular treatment sessions were less acceptable to these parents.

Post-treatment questionnaire. Eleven parents (seven mothers and four fathers) completed the post-treatment questionnaire. All parents 'agreed' or 'strongly agreed' that they were satisfied with the treatment programme, the length of the treatment sessions, and would recommend the treatment to other families. Ten parents 'agreed' or 'strongly agreed' that they were satisfied with the number of treatment sessions, the outcomes of treatment, and felt equipped to help their child to overcome OCD; one parent 'neither agreed nor disagreed' with these statements and commented that they would prefer more sessions, delivered face-to-face, and a clearer explanation of expected treatment outcomes.

References

Allard, C., Thirlwall, K., Cooper, P., Brown, A., O'Brien, D., & Creswell, C. (2022). Parents' perspectives on guided parent-delivered cognitive behavioral therapy for childhood anxiety disorders: A qualitative study. *Journal of Emotional and Behavioral Disorders*, *30*(3), 235-244. https://doi.org/10.1177/10634266211028199

Chessell, C., Halldorsson, B., Harvey, K., Guzman-Holst, C., & Creswell, C. (2021). Cognitive, behavioural and familial maintenance mechanisms in childhood obsessive compulsive disorders: A systematic review. *Journal of Experimental Psychopathology*, *12*(3), 20438087211036581.

Chessell, C., Harvey, K., Halldorsson, B., Farrington, A., & Creswell, C. (2022, June 16). *Parents views towards parent involvement in cognitive behavioural therapy (CBT) for preadolescent children with obsessive compulsive disorder (OCD).* Open Science Framework. https://osf.io/6q7c9

Chessell, C., Harvey, K., Halldorsson, B., Farrington, A., & Creswell, C. (2023). Parents' experiences of parenting a preadolescent child with OCD: A qualitative study. *Emotional and Behavioural Difficulties*, 1-18. https://doi.org/10.1080/13632752.2023.2215036

Craske, M. G., Treanor, M., Conway, C. C., Zbozinek, T., & Vervliet, B. (2014). Maximizing exposure therapy: An inhibitory learning approach. *Behaviour research and therapy*, *58*, 10-23. https://doi.org/10.1016/j.brat.2014.04.006

Creswell, C., & Willetts, L. (2019). *Helping your child with fears and worries* (2nd ed.). Robinson.

Miller, S., Duncan, B., & Johnson, L. (2000). *The Session Rating Scale 3.0.* Springer Publishing Company.

Halldorsson, B., Elliott, L., Chessell, C., Willetts, L., & Creswell, C. (2019). *Helping your child with fears and worries: A self-help guide for parents treatment manual for therapists* [Unpublished manuscript]. University of Reading.

Hill, C., Chessell, C., Percy, R., & Creswell, C. (2022). Online Support and Intervention (OSI) for child anxiety: a case series within routine clinical practice. *Behavioural and Cognitive Psychotherapy*, *50*(4), 429-445.

National Institute of Health and Care Excellence. (2005, November 25). *Obsessive compulsive disorder and body dysmorphic disorder: treatment.* National Institute of Health and Care Guidance. https://www.nice.org.uk/guidance/cg31