

A Systematic Evaluation of Cognitive Remediation Therapy (CRT) for the Treatment of Children and Adolescents with Anorexia Nervosa.

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- The Context - Rhodes Farm (RF)
- Systematic implementation of CRT at RF
- Results
- Discussion

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RHODES

FARM



- Rhodes Farm is a specialist treatment centre for children and adolescents aged 6-18 who need hospital treatment for an eating disorder.
- Currently we have 24 inpatient beds, funded by the public sector.
- The service treats young people from all over the UK and overseas.
- The service is moving to Rhodes Wood Hospital in Spring.

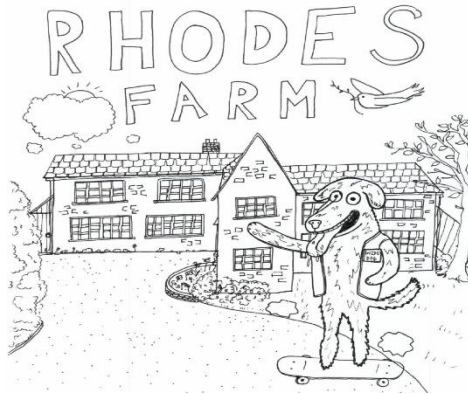
Multidisciplinary treatment

Peer group

Meaningful week

Psychological

Medical



Dietetic

School

Family

Nursing

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What is CRT?

- A treatment that focuses on the **process** rather than the content of thoughts.
- The **HOW** rather than the WHAT.
- Involves the use of exercises, tasks, games and puzzles etc.
- The choice of puzzles we use is informed by age, developmental status and cognitive styles.



Why CRT for AN?

- CRT aims to remedy the cognitive weaknesses that may underlie Anorexia Nervosa.
- It has been found to improve cognitive flexibility and the ability to see the big picture.
- These improvements are seen even in those who have been ill for many years.
- Young patients with AN readily engage in and enjoy the therapy.

See Tchanturia, Lounes & Holttum (2014) and Dahlgren & Rø (2014) for a review.

CRT helps patients to:

- Consider their cognitive styles by doing simple cognitive tasks.
- Reflect on how these relate to real life.
- Explore alternative strategies, pros and cons.
- If necessary apply new skills and strategies in real life to achieve personal goals.

Session Plan

A CRT cycle involves a total of 8 sessions, administered twice-weekly, for approximately 45 minutes.

The cognitive domains explored are:

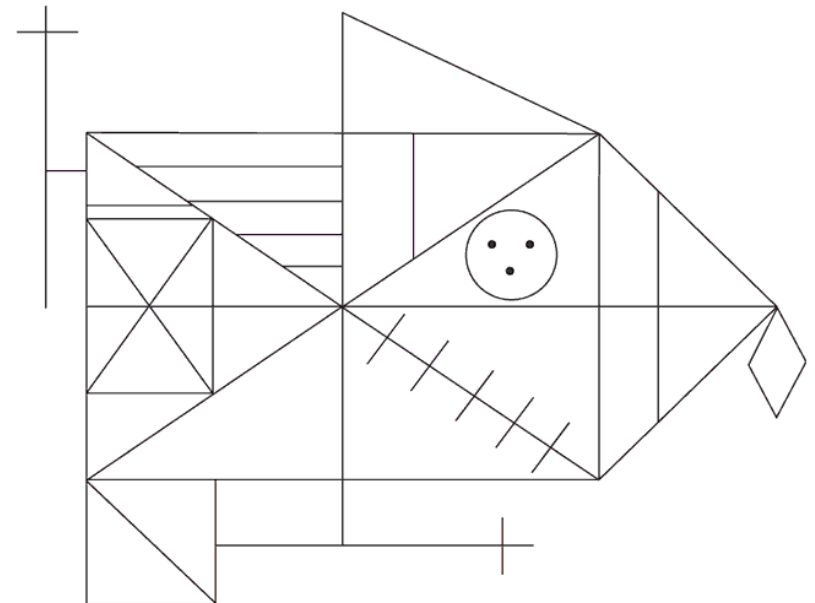
- Cognitive flexibility
- Central coherence
- Cognitive inhibition
- Visuo-spatial processing
- Memory
- Planning

Pre and Post Assessment

This assessment battery was developed based upon findings from the “Ravello Profile” (Rose et al., 2011).

It is administered pre and post the CRT cycle.

- **Central Coherence:** Copy and Immediate recall trials of the Rey Complex Figure Test. Central Coherence Index (CCI).



Pre and Post Assessment

- **Cognitive Inhibition:** Condition four of the colour/ word interference (D-KEFS). Time Taken – Error rate.

PURPLE **YELLOW** **RED**
BLACK **RED** **GREEN**
RED **YELLOW** **ORANGE**
BLUE **PURPLE** **BLACK**
RED **GREEN** **ORANGE**

- **Executive Functioning:** Self- Report (BRIEF–SR): Behavioural Rating Inventory of Executive Functioning measure.

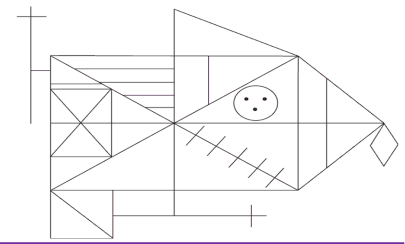
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Sample

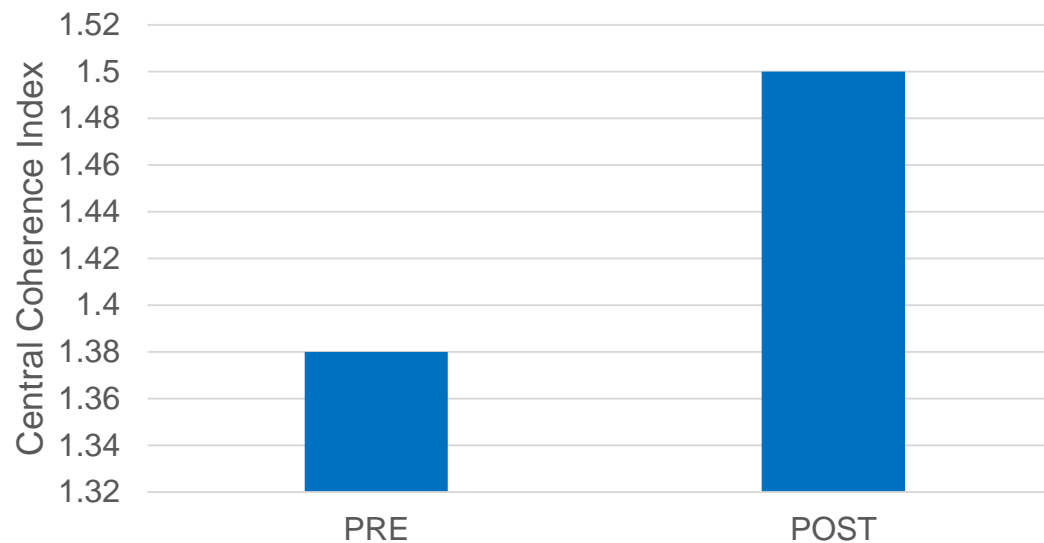
	N	Mean	Std. Dev.
WfH%	61	77.62	7.31
Age	61	15	1.4
EDE-Q Adm	58	3.89 (Clinical norm: 3.74)	1.51
All patients were female with a diagnosis of AN (ICD-10).			

Rey Complex Figure Test (RCFT)

Central Coherence



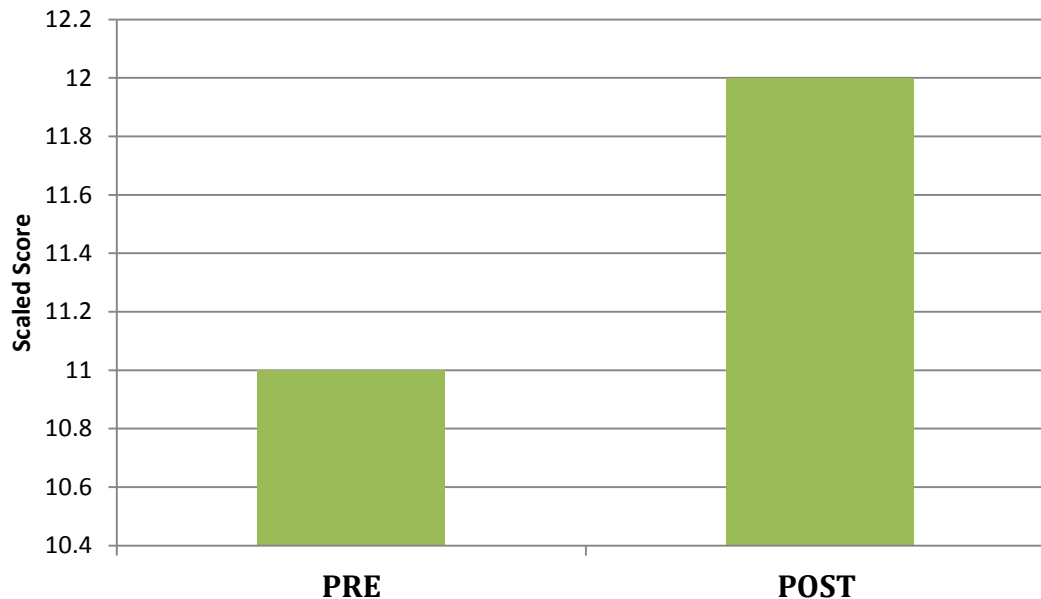
A repeated measures T-test indicated an **improvement in Central Coherence Index** between pre and post CRT assessments ($p < .001$).



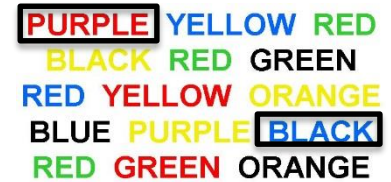
D-KEFS Color Word Interference Test Condition 4

PURPLE YELLOW RED
BLACK RED GREEN
RED YELLOW ORANGE
BLUE PURPLE BLACK
RED GREEN ORANGE

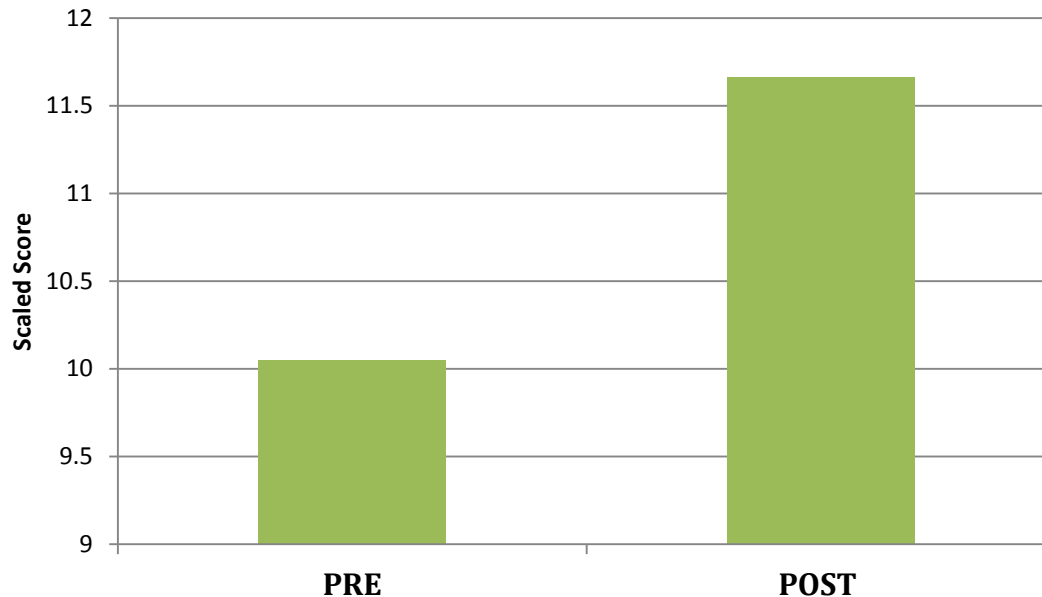
A Wilcoxon Signed-ranks test indicated an **improvement in Error rate** between pre and post CRT assessments ($p = .019$).



D-KEFS Color Word Interference Test Condition 4

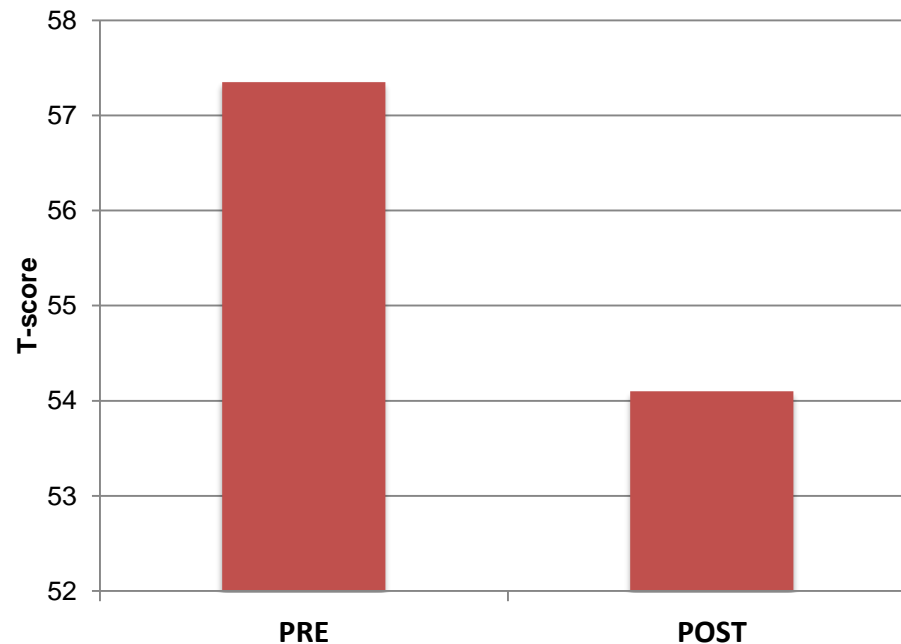


A repeated measures T-test indicated an **improvement for Time taken** between pre and post CRT assessments ($p < .001$.)



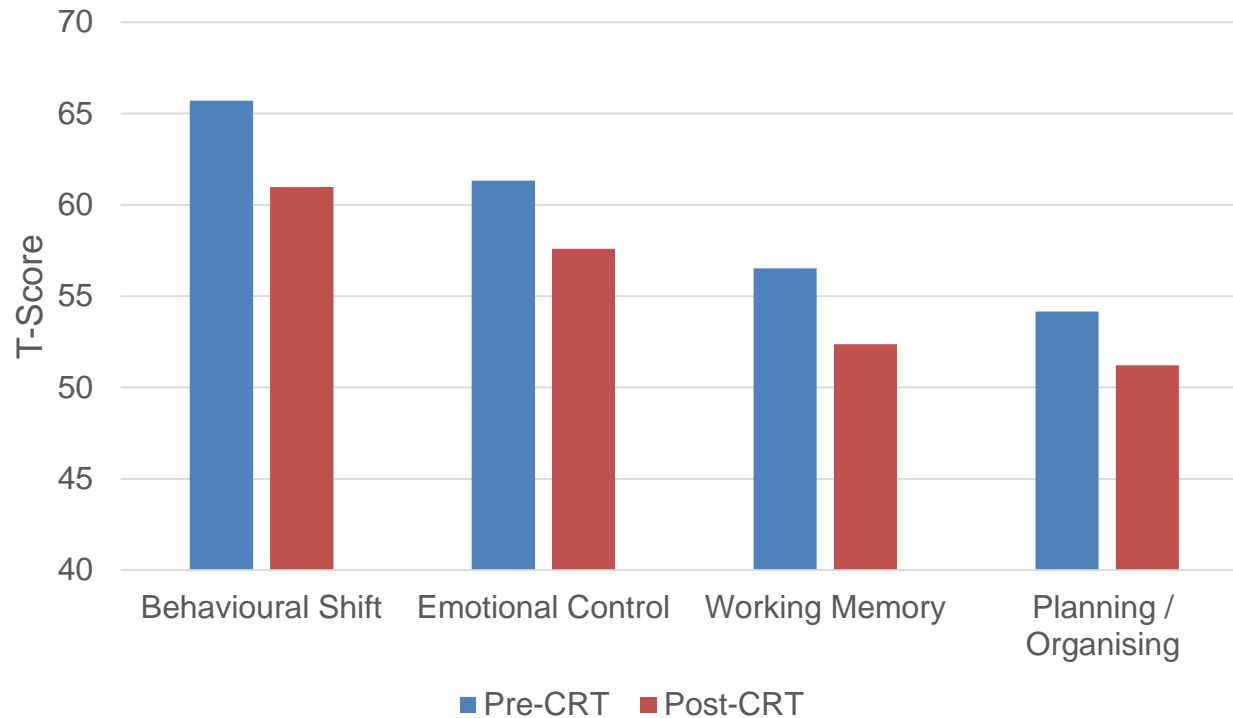
BRIEF Questionnaire Global Executive Composite

A Bonferroni corrected repeated measures t-test showed an **improvement in Global Executive Composite** scores $p=.003$



BRIEF Questionnaire Subscales

Bonferroni corrected repeated measures T-Tests in each subscale found a **significant improvement** on:



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Discussion

- The sample size was large.
- A weakness is that no control group was available.
- Future studies should use a RCT design in a child and adolescent population.

Summary

- There are improvements after CRT for central coherence, cognitive inhibition.
- The patients feel there is an improvement in their cognitive functioning after CRT (BRIEF-SR results).
- The results are consistent with the literature (Dahlgren & Rø, 2014; Tchanturia, Lounes & Holtum, 2014).

References

Tchanturia, K., Lounes, N., & Holttum, S. (2014). Cognitive remediation in anorexia nervosa and related conditions: a systematic review. *European Eating Disorders Review, 22*(6), 454-462.

Dahlgren, C. L., & Rø, Ø. (2014). A systematic review of cognitive remediation therapy for anorexia nervosa—development, current state and implications for future research and clinical practice. *Journal of eating disorders, 2*(1), 1-12.

Rose, M., Davis, J., Frampton, I., & Lask, B. (2011). The Ravello Profile: Development of a global standard neuropsychological assessment for young people with anorexia nervosa. *Clinical child psychology and psychiatry, 16*(2), 195-202.

Thank You!

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