# TMS and OCD: Investigating the effects of rTMS on obsessions and compulsions

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#### **Introduction**

<u>Results</u>

rTMS has been shown to be effective in the treatment of OCD. A paired samples t-test found that baseline YOBCS scores There are no studies which have specifically investigated (M=26.28; SD= 6.76) were significantly higher compared to post whether TMS has a differential treatment effect on obsessions rTMS treatment scores (M=20.00; SD= 9.19), t(102) = 8.30, p<.001,

and compulsions.

(d= .81).

Paired samples t-test found that baseline YBOCS Compulsion

scores (M= 12.31; SD=9.54) were significantly higher compared to

post rTMS YBOCS Compulsion scores (M=9.54; SD= 5.03), t(102) =

6.80, p<.001, (d= 0.67).

Paired samples t-test found that baseline YBOCS Obsession scores (M=14.06; SD=3.42) were significantly higher compared with post rTMS YBOCS Obsession scores (M=10.42; SD=4.70), t

(102)= 8.72, p<.001, (d= 0.86).

### Method

103 patients (58 males, ages 17-73, average age = 37). OCD

symptoms were measured at baseline and after treatment with

the Yale-Brown Obsessive-Compulsive Scale (YBOCS). Patients

were treated with at least 5 sessions of rTMS for OCD (average

= 17 sessions, range 5-50 sessions). YBOCS scores ranged from

11-40 (average = 26) which with the YBOC, is equivalent to mild

to extremely severe OCD.

Patients received 1st line rTMS treatment: F4 (Left Dorsolateral

Prefrontal Cortex). cTBS. 40 secs. 80% rMT. Followed by FCZ (Supplementary Motor Area). Bilateral. Continuous 1Hz. 20 minutes. (1200 pulses) at 100% rMT. If the 1st line treatment was

unsuccessful, patients were treated using 2nd line treatment: FP1

(Left Medial OFC). Intermittent 1Hz. (360 pulses). 8.5 minutes. at

100% rMT. 5 min gap.

Mean YBOCS scores before and after rTMS treatment

Baseline Con

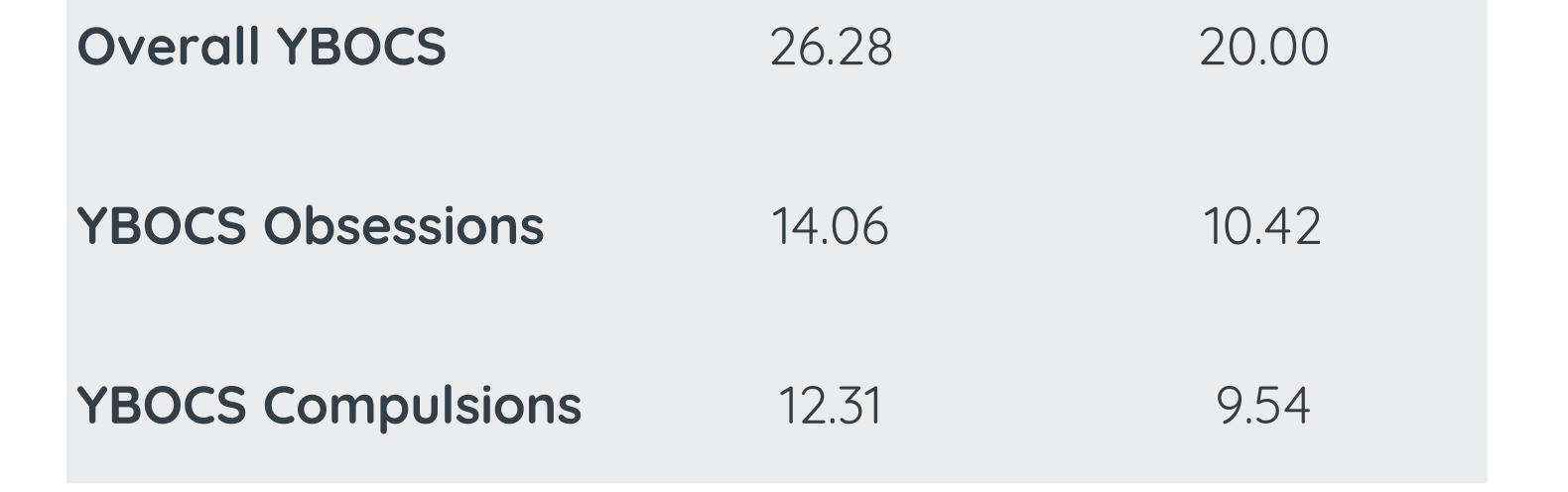
Completion

#### **Conclusion**

The results indicate that rTMS treatment significantly reduces overall YBOCS scores, as well as YBOCS Obsession and Compulsion scores, supporting our hypotheses. There is a trend to greater effect size (improvement) in the Obsession YBOCS scores (d= 0.86) compared YBOCS compulsion scores (d= 0.67), indicating that rMTS treatment may be more beneficial in treating the obsessional aspects of OCD.

Future research should attempt to replicate the findings of this

study with larger and more varied samples.



## **Conflict of Interest & Funding**

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