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## Background

Cognitive Behavioural Therapy (CBT) is effective for mood and anxiety disorders, including Obsessive Compulsive Disorder (OCD). While CBT has been available in Singapore for more than 20 years, it is traditionally administered face-to-face with the patient in a clinic, with each complete treatment requiring 8 to 17 sessions, each lasting 1-2 hours, resulting in long waiting times.

## New Approach

Internet-delivered CBT (ICBT) which is a form of web-based e-mental health intervention, is a promising approach in addressing long waiting times and treatment barriers (e.g., fear of stigma and discrimination, difficulties taking time away from work, transportation and scheduling difficulties). ICBT has been offered in other countries, such as Netherlands, Sweden, Norway, Australia, New Zealand and Canada. The ICBT team within the Institute of Mental Health (IMH) has learnt from these experts and implemented ICBT for anxiety, depression (AD) and OCD, which enables patients to engage in therapy remotely. ICBT allows for one therapist to manage up to 20 patients concurrently, with significant cost savings compared to face-to-face therapy (f2f; Overall saving to patient per year \$1077; to institute: \$1149), as well as time-savings (240 minutes per patient per year for iCBT vs 960 minutes for f2f therapy)

## Delivery Method

ICBT was delivered by 2 teams from the Department of Psychology for patients of IMH. ICBT for OCD has been an ongoing clinical service since October 2022 while ICBT for AD started commenced on 07/02/2023.

The team comprises clinical psychologists with a psychiatrist as programme director.

## Suicide Risk Management

Patients with who are severely depressed (PHQ-9 $\geq$ 20) or actively suicidal (PHQ-9 item 9=3) were excluded. If PHQ-9 $\geq$ 20, PHQ-9 item 9=3 or PHQ-9 increase by 5, the therapist would contact the patient to assess suicidal risk, encourage patient to stay safe, activate safety plan agreed with the patient and revise safety plan if necessary.

## Treatment Outcome

A total of 89 patients enrolled into the ICBT programme (ICBT for AD: 31, ICBT for OCD: 58). 18 (58%) of the patients from ICBT for AD completed at least 4 of the modules, whereas 53 (91%) of the patients from ICBT for OCD completed the CBT programme.

The evaluation of the programme was conducted based on outcome measures (PHQ-9 for ICBT for AD; Y-BOCS for ICBT for OCD) that patients completed at each time point from the pre-assessment session, after completing each module as well as after completion of the ICBT programme.

### ICBT for AD

Patients' PHQ-9 scores significantly decreased from screening ( $M = 11.3$ ,  $SD = 5.65$ ) to Module 4 completion ( $M = 5.73$ ,  $SD = 5.72$ ;  $t = 4.05$ ,  $p < .001$ ,  $d = 5.27$ ). A similar trend was observed when comparing patients' scores from Module 1 ( $M = 11.28$ ,  $SD = 6.02$ ) to Module 4 completion ( $M = 5.73$ ,  $SD = 5.72$ ;  $t = 4.15$ ,  $p < .001$ ,  $d = 4.77$ ).

### ICBT for OCD

There was a significant reduction in OCD symptoms, measured by the Y-BOCS from pre-treatment ( $M=26.76$ ,  $SD=3.09$ ) to post-treatment ( $M=13.32$ ,  $SD=5.17$ );  $t(24)=13.44$ ,  $p<.001$ , with a large within-group effect size (Cohen's  $d=2.64$ ).

## Treatment Satisfaction

54.2% (N=24) of patients in ICBT for AD responded that they found the modules 'somewhat' or 'very relevant', whereas 100% of patients in ICBT for OCD were 'mostly satisfied' to 'very satisfied' with the ICBT content. Most participants (82% in ICBT for AD, 100% in ICBT for OCD) would recommend the ICBT programme to others.

## Future plans

Possibility for ICBT to be scaled up on a national level and adopted by other institutions (e.g., partners, GPs, VWOs, schools, prisons. There could also be further development of local ICBT programmes for different disorders, with varying options of course duration and guidance for users with different severity tiers and motivation level.