

# REFRESH: a low cost virtual CBT program for persistent cancer-related fatigue - a feasibility study

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... as someone with fatigue, it was difficult for me to get through it all in the time provided. I really like the content of the booklet ... and I look forward to working more on the techniques at my own pace.

I liked the contact with others in much the same situation. I didn't feel so isolated when listening to others with the same issues.



## BACKGROUND

Cancer-related fatigue (CRF) affects about 1:3 survivors after cancer treatment.

People with severe CRF describe:

- disabling lack of stamina,
- anxiety and depression, and
- distressing cognitive changes.



Cognitive behaviour therapy (CBT) is recommended for survivors with severe fatigue, but programs are difficult to access and resource intensive.

This single-arm study explored feasibility and perceived benefits of a virtual stepped-care CBT program. Stepped-care involves a sequence of interventions of different intensity, typically first low-intensity followed by higher intensity for those who need more therapy.

**METHOD:** Single arm feasibility study, before and after measures

### Participants

- Adults post cancer treatment or stable disease on maintenance therapy
- Persistent moderate to severe fatigue affecting daily life.

### Intervention schema (Figure)

STEP 1 – 5-week supported self-help CBT program: booklet and weekly brief contact. Table 1 shows program outline.

### STEP 2 eligibility

Fatigue score: FACIT-F<sup>1</sup> <34 and/or <10 point improvement

STEP 2 - 4-week small group CBT with psychologist via telehealth.

### Measures

- Feasibility – Acceptability, appropriateness and feasibility of intervention<sup>2,3</sup>, Satisfaction, Cost, Fidelity, Recruitment & Retention
- Psychosocial factors – FACIT-F<sup>1</sup>, self-efficacy for fatigue management<sup>4</sup>, EQ-5D-5L<sup>5</sup>, perceived changes (study-specific)

STEP 1 Chapter #	STEP 2 Session #	Topic
1		Understanding Fatigue
2	1	Understanding Feelings
3	2	Helpful Behaviours
4	3	Adaptive Thinking
5	4	Moving On

Table 1. REFRESH program outline

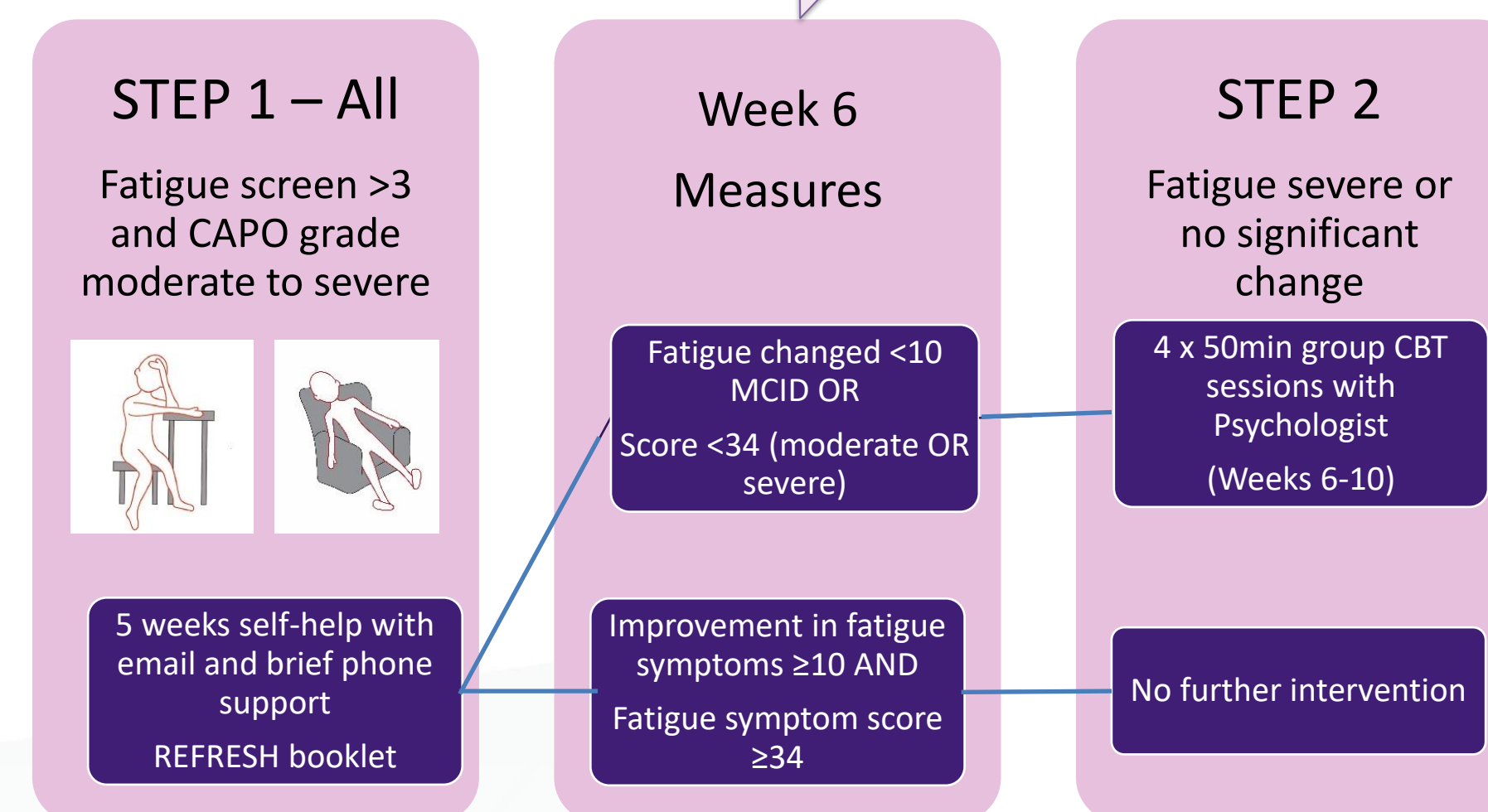


Figure. Study schema

Participant characteristics	All participants (n=19)	STEP 1 only (n=11)	STEP 1 & 2 (n=8)
Age in years	64.3 (19.8-79.8)	65.7 (19.8-79.8)	56.3 (33.7-69.7)
Sex (Female)	9 (52.9%)	4 (36.4%)	5 (62.5%)
Time since diagnosis (months)	22.6 (6.6-425.2)	21.7 (6.6-425.2)	29.4 (11.0-126.8)
Self-report T0 fatigue (1-10)	7 (3-10)	7 (4-10)	8 (3-10)
FACIT-fatigue T0 (baseline)	21 (11-40)	25 (17-40)	14 (11-38)
FACIT-fatigue T1 (6 wks, n=16)	30 (7-46)	35 (27-46)	18.5 (7-40)
FACIT-fatigue T2 (12 wks, n=15)	34 (9-48)	39 (28-48)	21.5 (9-40)

Table 2. Participant characteristics and fatigue scores – median (range)

## RESULTS – FEASIBILITY

- 17 of 19 participants completed STEP 1. Table 2 shows key characteristics.
- Of 13 eligible for STEP 2, 8 completed STEP 2 (3 groups)
- Remotely delivered CBT was feasible with high retention and adherence, high participant feasibility and satisfaction scores.
- Cost per participant  
STEP 1 - AU \$145; STEP 2 AU \$280 for STEP 2 (based on groups of 3)

## RESULTS – PSYCHOSOCIAL FACTORS

### Fatigue (Table 2)

- STEP 1 - 14 of 17 participants had a positive FACIT-F change score (3-17 points) significant overall improvement [t(16)=3.7, p<0.002, 95%CI (2.7, 9.7)]; medium effect size (d=0.63).
- Step 2 - A trend for continued improved fatigue for the entire group (ns)

### Fatigue self-efficacy

- STEP 1 - Improved [t(16)=3.8, p<0.002, 95%CI (0.7, 2.3)]; medium effect size (d=0.7)
- STEP 2 participants had lower baseline self-efficacy; increased after each STEP.

### Quality of life. No significant change.

### Perceived changes

- STEP 1 almost half the participants perceived improvements in mood, exercise levels, social activities, hobbies and/or concentration/motivation.
- STEP 2 - Both groups had continued improvements at 12 weeks. In particular STEP 2 participants reported improvements in mood, stress and physical activity.

## DISCUSSION

- Remotely delivered short-course CBT for cancer fatigue, including telehealth group therapy was feasible for participants and health practitioners.
- Higher levels of fatigue limited capacity to complete and practice the CBT activities without guidance.
- Those with more severe fatigue achieved greater gains with group therapy than self-help.
- Participants endorsed the REFRESH program, at a slower pace and longer period.
- Results suggest trialling a stratified rather than stepped-care approach to CBT, based on baseline fatigue severity. Primary outcomes should include functional, cognitive and behavioural measures that reflect the aims of CBT.

## REFERENCES

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