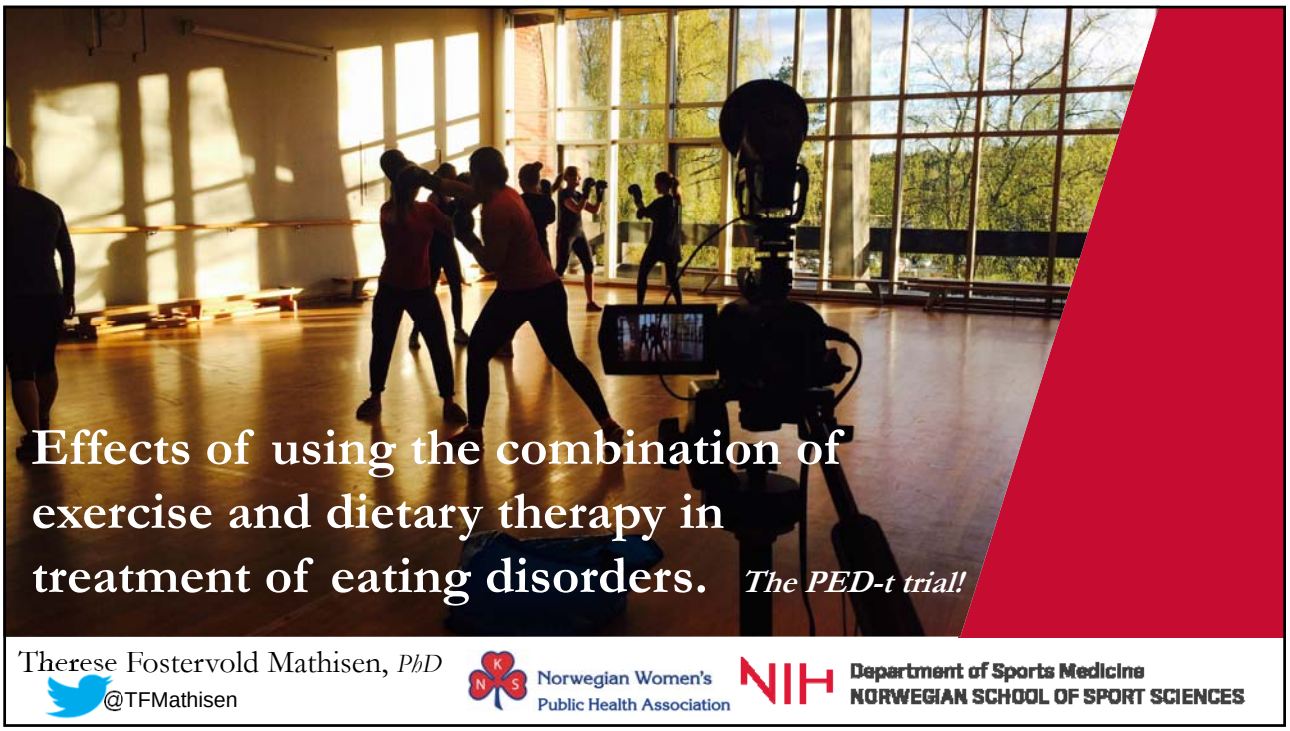

Effects of using the combination of exercise and dietary therapy in treatment of eating disorders. *The PED-t trial!*

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Background, *eating disorders*

- Overvaluation of BW / figure /food intake

  APA 2013

- Lifetime prevalence of 5-13%

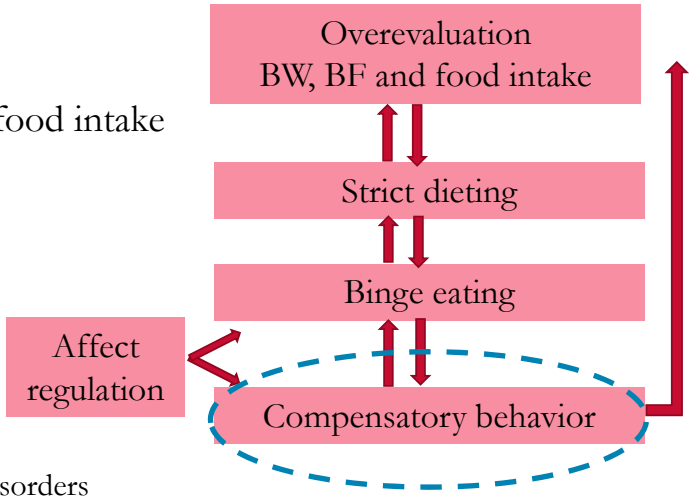
  e.g. Keski-Rahkonen et al 2016

- Diagnosis (*DSM-5*)
  - anorexia nervosa (AN)
  - bulimia nervosa (BN)
  - binge eating disorder (BED)
  - other specified feeding and eating disorders (OSFED)

  APA 2013

- High comorbidity

  e.g. Keski-Rahkonen et al 2016; Martinussen et al 2017



Cognitive behavior therapy,
conceptual model for understanding BN
Fairburn, & Wilson, 1993.

Background, *eating disorders*

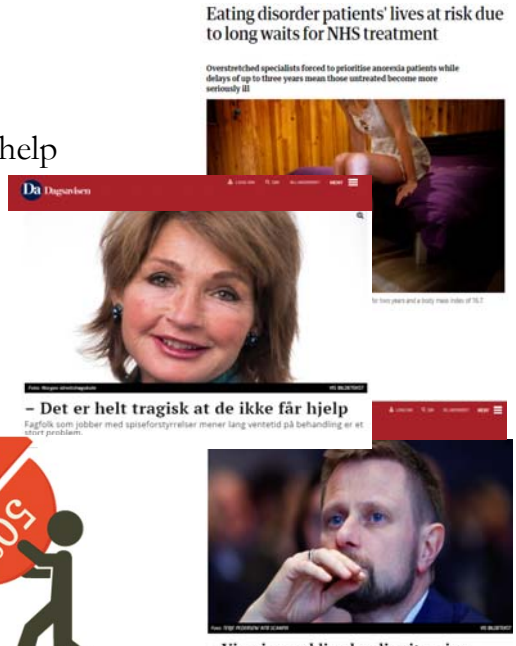
- <50% detected in primary health care / ask for help

- <20% offered specialized treatment
  - Low mental health literacy
  - Shame of illness
  - Low detection rate in primary health care
  - Long waitlists in special health care

  e.g. Kazdin et al 2017

- Cognitive behavior therapy (CBT)

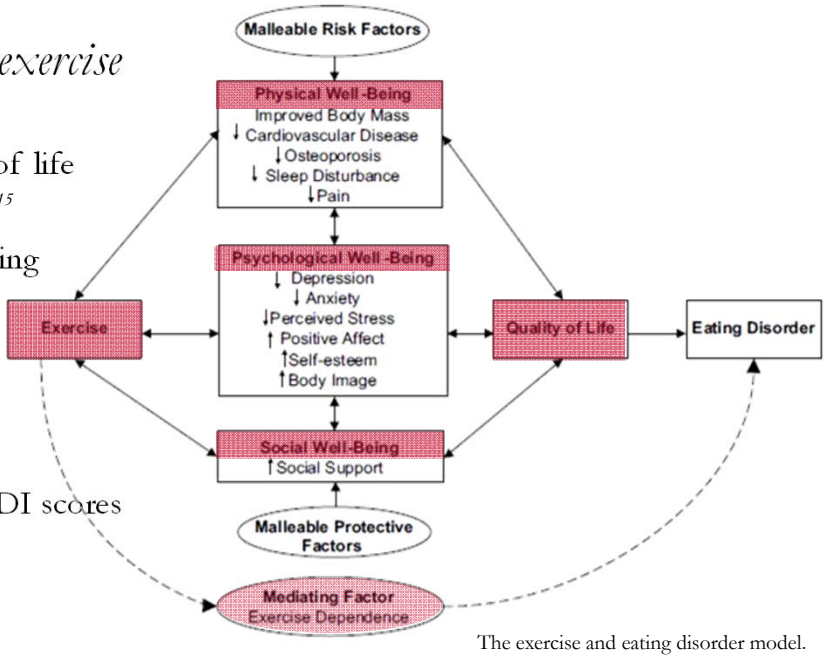
  e.g. Linardon et al 2017; Vocks et al 2010



Background, *physical exercise*

- Morbidity, mortality, quality of life
  e.g. Rosenbaum et al 2014; Lee et al 2012; Myers et al 2015
- Dysfunctional exercise in eating disorders
  e.g. Dalle Grave et al 2008
- Effects:
  - Reduced binge eating
  - Improved self-efficacy
  - Improved EDE-q and EDI scores
  - Remission

  e.g. Sundgot-Borgen et al 2002; Vancampfort et al 2013

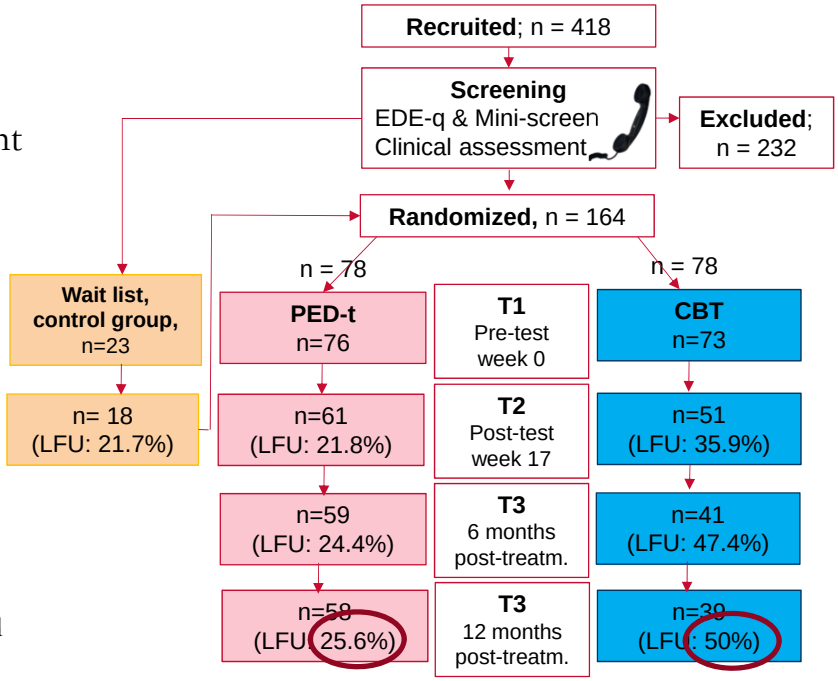


The exercise and eating disorder model.
Hausenblas et al 2008

Physical exercise & dietary therapy (PED-t)

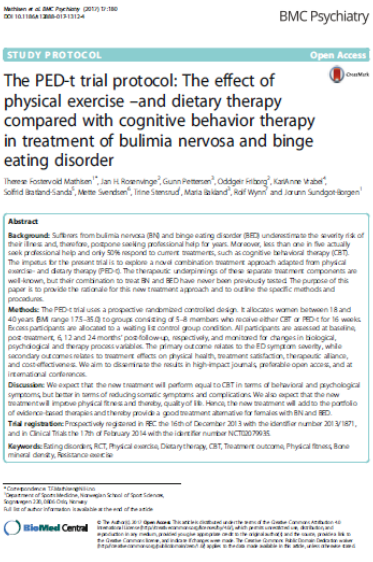
Recruitment

- 16 weeks group treatment
- Inclusion
  - BN or BED (*DSM-5*)
  - Women 18 – 40 years of age
  - BMI 17.5 – 35
  - Living nearby NSSS (Oslo)
- Exclusion
  - Planned pregnancy
  - Competing athletes
  - CBT-ED during last 2 years
  - Psychologic disorders in need of other treatment



PAPER I

describe the rationale for,
and the specific study protocol
from the PED-t trial



BMC Psychiatry

STUDY PROTOCOL Open Access

The PED-t trial protocol: The effect of physical exercise –and dietary therapy compared with cognitive behavior therapy in treatment of bulimia nervosa and binge eating disorder

Therese Fostervold Mathisen[1*], Jan H. Rosenvinge[2], Gunn Pettersen[3], Oddgeir Friborg[3], Karin Anne Vrabel[4], Solfrid Bratland-Sanda[3], Mette Sverdsen[4], Trine Stensrud[1], Maria Bakland[1], Rolf Wynn[1] and Jorunn Sundgot-Borgen[1]

Abstract

Background: Sufferers from bulimia nervosa (BN) and binge eating disorder (BED) underestimate the severity risk of their illness and, therefore, postpone seeking professional help for years. Moreover, less than one in five actually seek professional help and only 50% respond to current treatments, such as cognitive behavioral therapy (CBT). The impetus for the present trial is to explore a novel combination treatment approach adapted from physical exercise- and dietary therapy (PED-t). The therapeutic underpinnings of these separate treatment components are well-known, but their combination to treat BN and BED have never been previously tested. The purpose of this paper is to provide the rationale for this new treatment approach and to outline the specific methods and procedures.

Methods: The PED-t trial uses a prospective randomized controlled design. It allocates women between 18 and 40 years (BMI range 17.5–35.0) to groups consisting of 5–8 members who receive either CBT or PED-t for 16 weeks. Across participants are allocated to a waiting list control group condition. All participants are assessed at baseline, post-treatment, 6, 12 and 24 months' post-follow-up, respectively, and monitored for changes in biological, psychological and therapy process variables. The primary outcome relates to the ED symptom severity, while secondary outcomes relates to treatment effects on physical health, treatment satisfaction, therapeutic alliance, and cost-effectiveness. We aim to disseminate the results in high-impact journals, preferable open access, and at international conferences.

Discussion: We expect that the new treatment will perform equal to CBT in terms of behavioral and psychological symptoms, but better in terms of reducing somatic symptoms and complications. We also expect that the new treatment will improve physical fitness and thereby, quality of life. Hence, the new treatment will add to the portfolio of evidence-based therapies and thereby provide a good treatment alternative for females with BN and BED.

Trial registration: Prospectively registered in REC the 16th of December 2013 with the identifier number 2013/1871, and in Clinical Trials the 17th of February 2014 with the identifier number NCT02079935.

Keywords: Eating disorders, RCT, Physical exercise, Dietary therapy, CBT, Treatment outcome, Physical fitness, Bone mineral density, Resistance exercise

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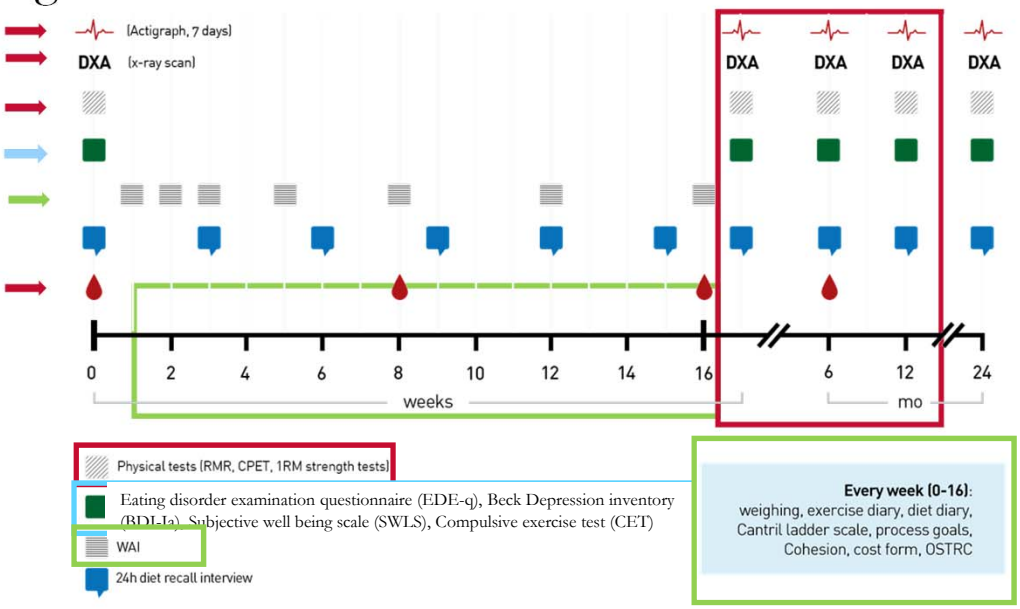
Design



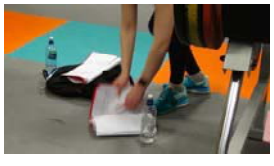
PED-t

		Supervised exercise	Unsupervised exercise	
Week	Microcycle	Resistance exercise	Interval running	Resistance exercise
1-3	1	10RM	Pyramid interval	10RM
4-7	2	8RM	Pyramid interval	10RM
8-11	3	6RM	Pyramid interval	10RM
12-14	4	4RM	Pyramid interval	10RM
15-16	5	2RM	Pyramid interval	10RM

Module	Therapy session	Targets
1	1 – 5	Dietary routines & structure
2	6 – 17	Nutritional knowledge & practical skills
3	18 - 20	Summary of future plans

CBT

Stages	Therapy session	Targets
1	1 – 4	Engagement, preparation and early behavior change
2	5 – 6	Monitoring and evaluating progress and barriers to change
3	7- 16	Modifying the core pathology of ED
4	17 - 20	Consolidating change and relapse prevention



Methods, *PED-t*

Monday
45 min resistance exercise
60 min dietary therapy

Wedensday
45 min interval running

Friday
45 min resistance exercise

Methods, *PED-t*

Therapy based on work by Denise Wilfley

(«Group CBT for BED», Therapist maual 1996):

- **Week 1 – 6**
  - *Structure*
- **Week 7 – 13**
  - *Nutritional knowledge*
  - *Practical*
- **Week 14 – 16**
  - *Experience so far*
  - *Future*

- **Structure**:
  - Meal planning
  - Serving size/portion control
  - Eating situation
- **Knowledgde**
  - Weight regulation
  - Norw. nutritional challenges
  - Sports nutrition

PAPER II

*describe the **physical fitness** in women with BN or BED more thoroughly than previously, and to evaluate the effect of a previous diagnosis of AN on physical fitness*


EATING DISORDERS

WILEY

ORIGINAL ARTICLE

EATING DISORDERS

Body composition and physical fitness in women with bulimia nervosa or binge-eating disorder

Therese Fostervold Mathisen MSc[1] | Jan H. Rosenvinge PhD[2] | Oddgeir Friborg PhD[2] | Guro Pettersen PhD[3] | Trine Stensrud PhD[3] | Bjørge Herman Hansen PhD[3] | Karoline E. Undenhaug MSc[3] | Elisabeth Teinung MSc[1] | KariAnne Wabel PhD[4] | Mette Svendsen PhD[5] | Solfrid Bratland-Sanda PhD[6] | Jorunn Sundgot-Borgen PhD[1]

Abstract

PAPER III

*investigate the acute and long-term effect from PED-t or CBT on **compulsive exercise** and **levels of physical activity***

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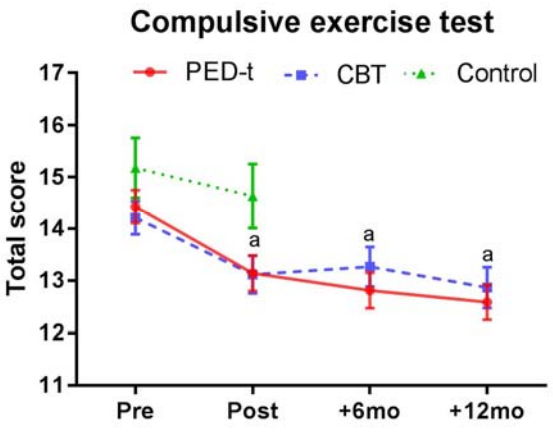
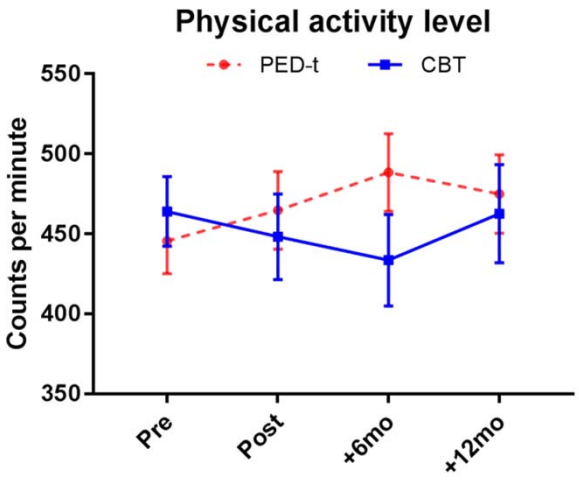
Paper III: Treatment effects on compulsive exercise and PA



a) Significant within-group change in both therapy groups



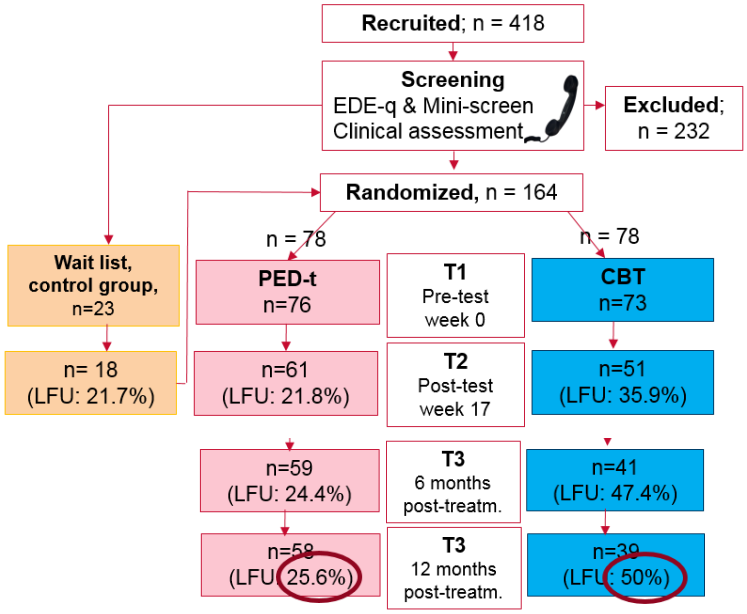
PAPER IV

investigate the acute and long-term treatment effect from PED-t or CBT on ***remission from ED****, ED symptomology, and measures of mood and life quality*

Paper under review

Limitations

- Sample
- BMI
- Setting
- Loss of power
- (skewed) Drop-out



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Implications

- Physical activity can safely be included in treatment of BN and BED
- PED-t can increase motivation for treatment
- PED-t offers highly available therapists
- Group format successful

  ⇨Reduced waitlist time !

- PED-t increases the pool of available therapy options

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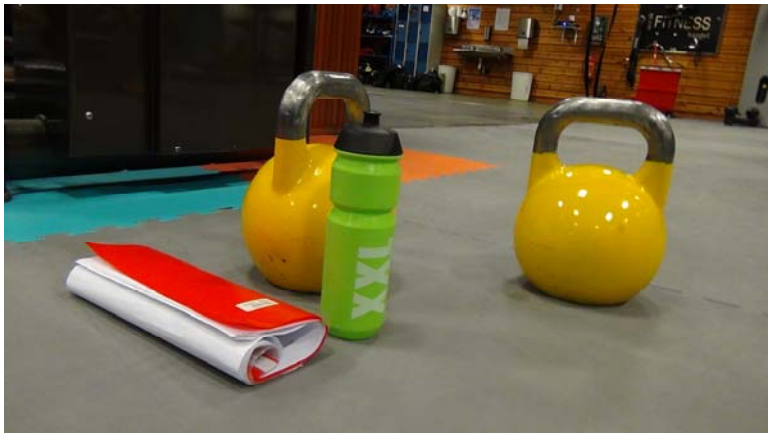

Norsk Osteoporoseforbund