

PRO-FIT-CARE Study: Feasibility Assessment of an Online Exercise Program for Persons Living with Obesity and Experiencing Female Infertility

Objective

The primary objective of the PRO-FIT-CARE (PROmoting FITness for CARdiometabolic & REproductive Health) study was to assess the feasibility of a moderate-to-high-intensity online exercise program for persons with obesity and female infertility.

Practice Points

1. Weight loss is often the first therapeutic intervention for patients diagnosed with obesity and infertility.
2. Engagement in physical activity has been shown to positively impact ovulation rate, restoring menstrual cycles, and metabolic pathways associated with fertility, independent of weight loss.
3. Evidence suggests that compared to low levels of physical activity, moderate-to-high amounts of physical activity significantly reduce the overall risk of infertility.
4. There has been substantial debate surrounding the feasibility of prescribing moderate-to-vigorous-intensity exercise in clinical populations, such as for persons with obesity and infertility.

Methods/Data (K.P. Wadden, C.E. Barrett, E. McGowan, F. Basset, L. Twells)

1. A pre-experimental feasibility pre-test-post-test study design with one group was conducted. The intervention took place in a virtual, online environment from Jun 2021 to Sep 2021 during COVID-19 restrictions.
2. 32 participants were recruited for the study through two recruitment strategies: (1) targeted social media groups (e.g., Facebook fertility support groups) and (2) physician referrals from the local fertility clinic.

3. To evaluate the efficacy of the exercise intervention, cardiorespiratory fitness was assessed using the Modified Canadian Aerobic Fitness Test (mCAFT) before and after the exercise intervention. Due to COVID-19 restrictions, participants performed the submaximal exercise testing virtually using the Zoom online platform.

Results

- 11 of the 32 participants consented to partake in the study (34.4% consent rate). Age of participants ranged from 28 to 42 years old at time of enrolment, with a mean age of 34 (SD 3.74) years, and resided in the Canadian province of Newfoundland and Labrador (NL). At baseline, the average Body Mass Index was 40.3 ± 4.54 kg/m², which classified as a weight status of obese class III.
- The assessment of attendance reflected a low level of acceptance of the exercise intervention. One person achieved 80% of the required attendance deemed acceptable. Adherence to the program decreased as the 12 weeks progressed, with a significant decline in the fourth block of four weeks.
- Based on results from the weekly satisfaction survey, participants reported overall high levels of satisfaction with the exercise intervention based on Likert scale responses.
- When comparing participants' cardiorespiratory fitness to normative-referenced percentile values for age and sex, all participants were below the 20th percentile. Of the eight participants who completed the post-exercise testing, two participants (ID 006 and 024) improved their percentile ranking and progressed from the 20th to the 50th and 10th to the 40th following the completion of the exercise intervention.

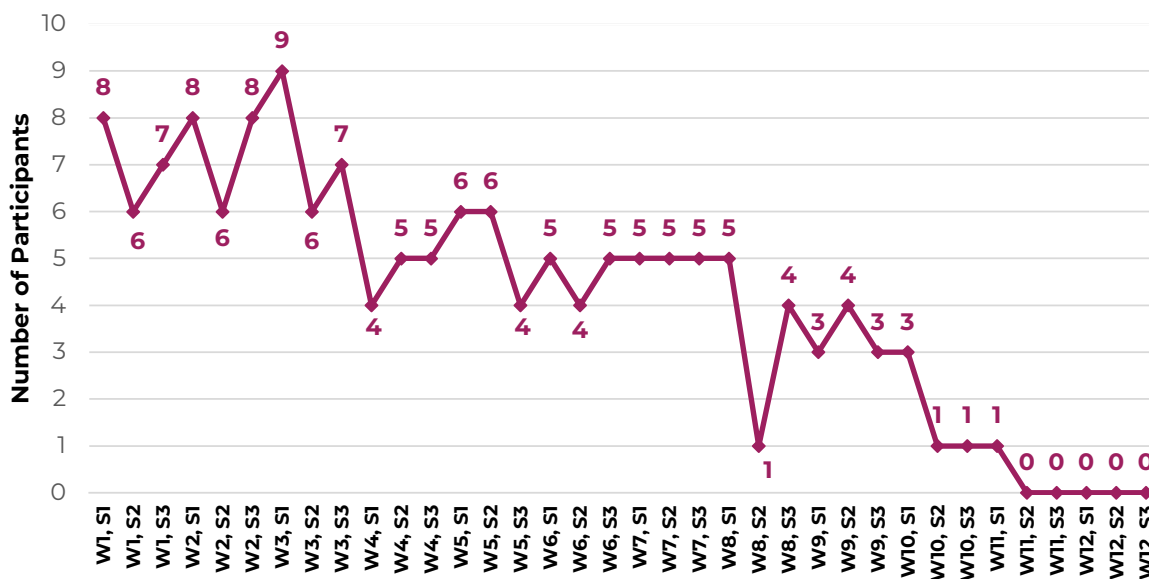


Figure 1. Group Data of Attendance of Exercise Sessions

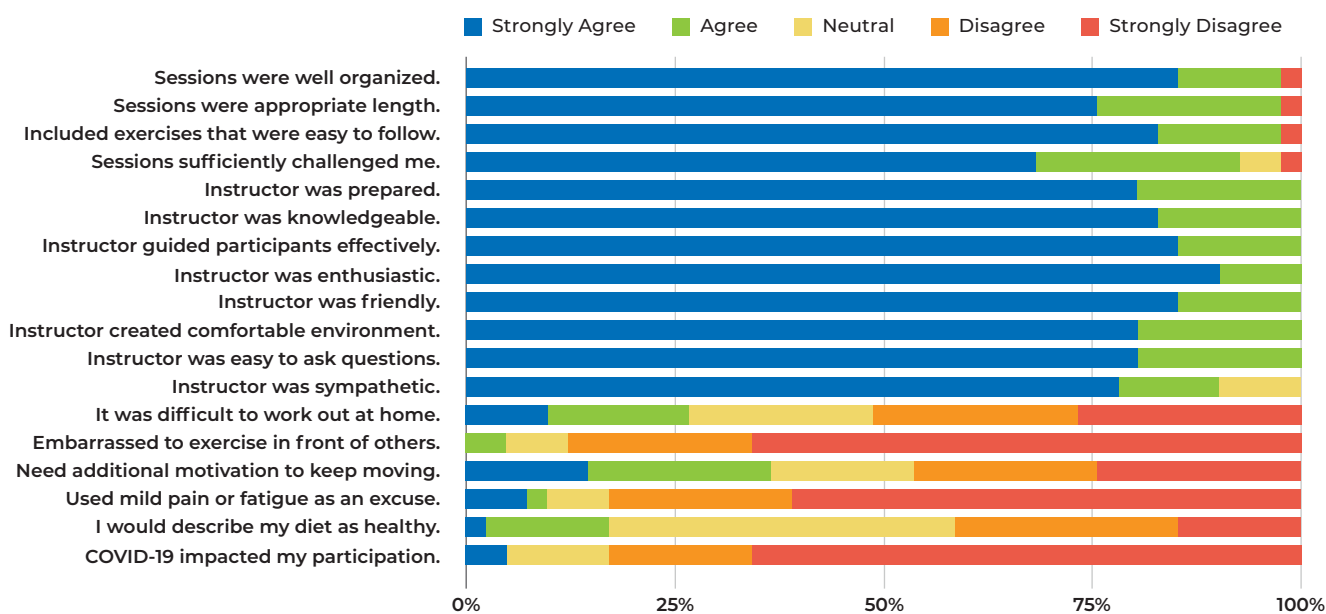


Figure 2. Group Data of the Weekly Check-in Survey: Likert Scale Results of Participant Satisfaction

Conclusions

1. The present study design exhibited low feasibility based on a number of outcomes related to acceptability and adherence.
2. Future exercise and fertility research should investigate the feasibility of a hybrid approach of

supervised one-on-one and group-based exercise. Such initiatives could help improve participants' attendance and adherence to the intervention to an acceptable level, therefore allowing for an examination of the efficacy of exercise in improving outcomes related to fertility.