Table I - *Qualitative synthesis of selected articles*

Author, Year	Objective	Sample	Intervention protocol	Analyzed outcome	Results
Palomba *et al.* [16], 2010	To test the hypothesis that a 6-week intervention (structured exercise training and hypocaloric diet) increases the likelihood of ovulation after CC in overweight/obese patients with CC-resistant PCOS.	Total = 96. Women with PCOS; age: 18-35 years old; BMI = 25-34 kg/m².	Group 1 (n = 32): SET (3 workouts/week on an ergometric bicycle for 30 min); intensity: 60–70% VO_{2max}; duration: 1.5 months + hypocaloric diet with 35% high protein composition and a deficit of 1000 kcal per day). Group 2 (n = 32): observation + CC (a fixed dose of 150 mg/day for 5 days). Group 3 (n = 32): SET + Diet + CC. Follow-up time: 6 weeks.	Ovulation rate monitored by serial US TV successively every 4 days and then serially daily until ovulation of the dominant follicle with mean diameter ≥ 12 mm. Ovulation was identified by the decrease in follicular dimensions and in the fluid in the *cul-de-sac* and confirmed by the plasma P assay (0.10 ng/ml) evaluated by US 7 days before the expected menstruation.	There was presence of menstrual bleeding at the end of the study in patients from Group 1 (12.5%), Group 2 (9.4%) and Group 3 (34.4%) and a significant increase (p = 0.008) in the rates of ovulation was observed of participants in Group 3 (p = 0.035) compared to those in Groups 1 and 2 (p = 0.020). There was also 1 pregnancy of a participant in Group C.
Nybacka *et al.* [17], 2011	To compare the influence of dietary management and/or physical exercise on ovarian function and metabolic variables in women with PCOS.	Total: 57. Women with PCOS; age: 18-40 years old; BMI > 27 kg/m².	Group 1 (n = 19): diet (total caloric intake reduced by 600 kcal/day compared to before intervention). Group 2 (n = 19): physical, aerobic and/or bodybuilding exercise, individually adjusted and supervised by a physiotherapist. Group 3 (n= 19): dietary change + physical activity. Follow-up time = 4 months.	Ovulation rate (maximum number of follicles in a plane and volume of the largest follicle and ovary) and menstrual pattern (menstrual bleeding). Both confirmed by the elevation of the serum level of progesterone in the luteal phase.	The three intervention groups improved the menstrual pattern (p < 0.05). Of the 43 participants, 69% exhibited a more regular menstrual pattern coming out of oligo/amenorrhea, and in 35% of these, ovulation was detected, with no significant difference between groups.

Legro et al. [18], 2015	To determine the relative effectiveness of preconception intervention on reproductive and metabolic abnormalities in overweight/obese women with PCOS.	Total = 149. Women with infertility due to PCOS; age: 18-40 years old; BMI: 27 to 42 kg/m^2.	Group 1 (n= 49): use of continuous OCC (Ethinylestradiol 200mcg/1g of Norethisterone Acetate). Group 2 (n= 50): SEM (calorie restriction + weight loss medication such as orlistat or sibutramine + increased physical activity to promote 7% weight loss). Group 3 (n= 50): combined treatment (continuous OCC + SEM). Follow-up time = 16 weeks.	Ovulation rate (monitoring of serum progesterone and ultrasound levels) and viable pregnancy rate (monitoring of serum hCG levels + US to document fetal viability). In addition, medical records of the pregnancy were reviewed to verify birth outcomes.	The ovulation rate was significantly higher ($p < 0.05$) in the group whose intervention was combined (67.1%) when compared to the group whose intervention was only OCC (46.1%). As for the conception rate, the number of viable pregnancies and the number of miscarriages, there were no significant differences between the groups when compared.
Mutsaerts et al. [19], 2016	To analyze the rate of vaginal delivery of a healthy full-term fetus at 24 months after the intervention.	Total = 577. Infertile women with PCOS; age: 18-39 years old; BMI: ≥ 29 kg/m^2.	Group 1 (n = 290): unsupervised exercise, 10,000 steps/day 2–3 times/week (30 min) + diet (calorie intake reduced by 600 kcal/day, with a minimum caloric intake of 1200 kcal/ day) + motivational counseling), followed by standard infertility Tx. Group 2 (n = 287): standard infertility treatment (CC 50 mg/day for 5 days and gonadotropin therapy if ovulation was not induced + IVF). Follow-up time = 24 months.	Rate of vaginal deliveries of healthy fetuses 37 weeks or older.	There were no significant differences in the live birth rates of the 43.9% intervention group versus the 53.9% control group (intervention group rate ratio, 0.82; [CI] = 0.69-0.97). There was also no significant difference in the rates of pregnancy-related complications in the analyzed groups.
Sim et al. [20], 2014	To assess whether weight loss impacts pregnancy rates in obese women with PCOS undergoing infertility treatment.	Total = 49. Infertile women with PCOS, age: 18-37	Group 1 (n = 27): physical activity, with the goal of 10,000 steps a day for 6 weeks + light to moderate physical exercise for 3 months + low-calorie diet in the first 6	Clinical pregnancy rate in the 12 months after the intervention.	There was a pregnancy rate 6 times higher in the intervention group than in the control group, with 12 full-term births in the intervention group and 2

years; BMI ≥ 30 kg/m^2.	weeks followed by a low-calorie diet (2500kj deficit) + consultation with a clinician for psychological follow-up. Group 2 (n = 22): standard care. Follow-up time = 12 weeks.		births in the control group. There was no significant difference in the rates of pregnancy-related complications between the analyzed groups.

CC = Clomiphene Citrate; PCOS = Polycystic Ovary Syndrome; BMI = Body Mass Index; SET = Structured Exercise Training; VO^2$_{max}$ = Maximal Oxygen Ventilation; US = Ultrasonography; TV= Transvaginal; OCC = Oral Contraceptive; LSM = Lifestyle Modification; hCG = Human Chorionic Gonadotropin; Tx = treatment; IVF = *In Vitro* fertilization