

## Effect of *Labisia pumila* var. *alata* with a Structured Exercise Program in Women with Polycystic Ovarian Syndrome

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**Abstract :** Lifestyle, physical activity, food intake, genetics and medication are contributing factors for people getting obese. Which in some of the obese people were a low or non-responder to exercise. And obesity is very common clinical feature in women affected by Polycystic Ovarian Syndrome (PCOS). *Labisia pumila* var. *alata* (LP) is a local herb which had been widely used by Malay women in treating menstrual irregularities, painful menstruation and postpartum well-being. Therefore, this study was carried out to investigate the effect of LP with a structured exercise program on anthropometric, body composition and physical fitness performance of PCOS patients. By using a single blind and parallel study design, where by subjects were assigned into a 16-wk structured exercise program (3 times a week) interventions; (LP and exercise; LPE, and exercise only; E). All subjects in the LPE group were prescribed 200mg LP; once a day, for 16 weeks. The training heart rate (HR) was monitored based on a percentage of the maximum HR (HRmax) achieved during submaximal exercise test that was conducted at wk-0 and wk-8. The progression of aerobic exercise intensity from 25-30 min at 60 - 65% HRmax during the first week to 45 min at 75-80% HRmax by the end of this study. Anthropometric (body weight, Wt; waist circumference, WC; and hip circumference, HC), body composition (fat mass, FM; percentage body fat, %BF; Fat Free Mass, FFM) and physical fitness performance (push up to failure, PU; 1-minute Sit Up, SU; and aerobic step test, PVO2max) were measured at wk-0, wk-4, wk-8, wk-12, and wk-16. This study found that LP does not have a significant effect on body composition, anthropometric and physical fitness performance of PCOS patients underwent a structured exercise program. It means LP does not improve exercise responses of PCOS patients towards anthropometric, body composition and physical fitness performance. The overall data shows exercise responses of PCOS patients is by increasing their aerobic endurance and muscle endurance performances, there is a significant reduction in FM, PBF, HC, and Wt significantly. Therefore, exercise program for PCOS patients have to focus on aerobic fitness, and muscle endurance.

**Keywords :** polycystic ovarian syndrome, *Labisia pumila* var. *alata*, body composition, aerobic endurance, muscle endurance, anthropometric

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