THE FOOD FREQUENCY INTAKE AND EATING BEHAVIOURS OF METABOLICALLY OBESE AND NON OBESE POLYCYSTIC OVARY SYNDROME WOMEN

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Introduction:

Normal weight obesity is characterized as regular BMI and excessive body fatness. This type of metabolic obesity may be observed and overlooked in polycystic ovary syndrome women (PCOS), in whom the obesity and increased cardiometabolic risk are observed. There is limited data concerning eating habits and lifestyle behaviours of/in normal weight obesity PCOS women.

The purpose of this study is to distinguish the food frequency intake and eating habits behaviours of PCOS women characterized by regular weight and body fatness, regular weight and excess fatness and overweight and excess body fatness.

Methods:

Women with PCOS (n=149, BMI: 26 ± 6 kg/m^2, aged 17-44 years) were divided into three groups according to the BMI and body fatness percentage (FM%): Regular weight and FM% (RW, n=64), regular weight and high FM% (RWHF, n=24) and high weight and high FM% (HWHF, n=61). The FM% was measured by air displacement plethysmography (BodPod, Life Measurement Inc, Concord, CA). Anthropometrics included weight, height and waist-to-hip-ratio (WHR) were measured. Food frequency intake and lifestyle behaviours were assessed by Dietary Habits and Nutrition Beliefs Questionnaire (KomPAN, The Committee of Human Nutrition, Polish Academy of Science). To assess psychological factors influencing nutrition, My Eating Habits (MEH) Questionnaire was used. To detect the differences between the groups Kruskall-Wallis ANOVA and Mann Whitney-U tests were used.
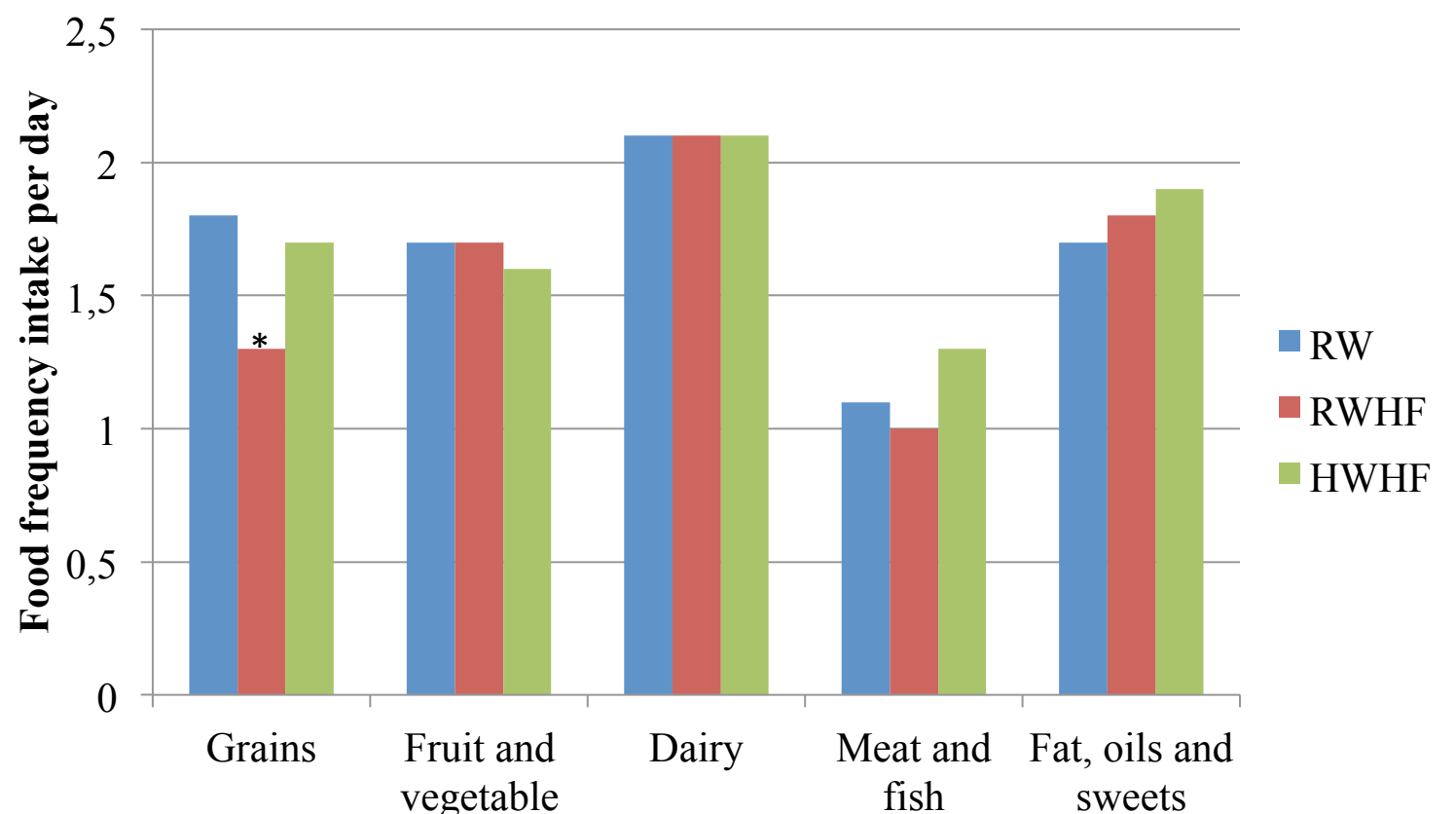

Figure 1: Food frequency intake . *The amount of food groups is calculated as portion per day. Grains group was composed of breads, cereals, pasta, oatmeal , rice. Fruit and vegetables: Fruit, vegetables, legumes. The dairy group contained milk, fermented milk products, cottage cheese. Meat and fish group incuded red, white meat, fish, cold meats, sausages. Fat, oils and sweets included oils, sweets, fats, as well as fried dishes and fast food. p<0,05 indicated as *.*

The **results** showed that the groups with higher body fatness (HWHF and RWHF) had significantly higher scores of dietary restrictions than the RW group. The RWHF group had significantly lower frequency intake of grains and lower physical activity in relation to other groups. In the group HWHF we indicated the higher risk of eating disorders since scored there higher in emotional overeating section of Eating Habits questionnaire.

Characteristics	RW	RWHF	HWHF
Age (y)	26±5	27±5	27±6
Body mass (kg)	59,2±6,8	63,8±8,7	87,0±14,6*
BMI (kg/m^2)	21,3±1,8	23,2±2,8	31,5±5,1*
% body fat	30,4±0,04*	39,4±0,3	44,5±6,0
WHR (-)	0,77±0,1	0,80±0,1	0,85±0,1

Table 1: Subjects characteristics. *p<0,05 indicated as *.*

My Eating Habits	RW	RWHF	HWHF
Habitual overeating	2,2±1,5	2,0±1,5	2,4±1,9
Emotional overeating	2,0±1,2	2,4±1,1	2,8±1,2*
Dietary restrictions	1,5±1,2*	2,5±1,1	2,5±1,5
Total	5,6±2,9	5,8±2,6	7,6±3,3*

Table 2: My Eating Habits (MEH) questionnaire . *The amouts are shown in points. p<0,05 indicated as *.*

	RW	RWHF	HWHF
Physical activity at work			
Low	57%	70%	59%
Medium	36%	18%	30%
High	7%	12%	11%
Physical activity during free time*			
Low	27%	49%	39%
Medium	46%	42%	42%
High	27%	9%	13%
Sitting during the day			
Less than two hours	24%	17%	17%
Two to four hours	29%	9%	19%
Four to six hours	16%	25%	16%
Six to eight hours	8%	5%	11%

Table 3: Self-reported physical activity. *The amouts are shown in points. p<0,05 indicated as *.*

Conclusion:

The differences in body fatness in PCOS women might by driven by eating behaviours and frequency of intake selected food groups. Individual approach emphasized on dietary coaching of eating and lifestyle habits, might be beneficial to body composition management and cardiometabolic risk reduction in PCOS women.

References

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