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## Dietary fibre and fat intake in postpartum women and its association with income and ethnicity: the Supporting MumS cohort

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Good nutrition during the postpartum period, which is also the inter-pregnancy period for many women, has short and long-term health benefits for the mother and her offspring<sup>(1)</sup>. Gaining a better understanding of mothers' dietary patterns at the postpartum stage will help shape appropriate strategies to encourage the adoption of a healthy and more varied diet. This exploration is a preliminary analysis that aims to assess intake of total fat and dietary fibre in a UK cohort of postpartum women with overweight and obesity and examine its relationship with income and ethnicity.

A sample of 892 postpartum women (up to two years after having a baby) with overweight or obesity were recruited from five UK locations (Belfast, Bradford, London, Stirling, Cardiff) to participate in the Supporting MumS (SMS) randomised controlled trial to examine the effectiveness of an automated text-based delivered weight management intervention. At baseline, researchers measured participants' height and weight and calculated their body mass index (BMI). Baseline diet was self-reported and assessed using the *Fat and Fibre Barometer* (FFB), a validated scale measuring the consumption frequency of 20 dietary sources of fibre or fat<sup>(2)</sup>. Items were scored from 1-5 and an average FFB score was calculated; greater values indicate a diet higher in fibre-rich foods and lower in fat-rich foods. Information on income and ethnicity was also collected. Multivariable linear regression analysis tested for associations between FFB scores and ethnicity and household income, accounting for BMI, age and study site.

Participants were from a range of ethnicities (Asian: 17%,  $N = 151$ ; Black: 11%,  $N = 100$ ; White: 66%,  $N = 589$ ; Mixed/Other: 6%,  $N = 52$ ). Household income distribution was:  $\leq \pounds 40K = 41.5\%$ ,  $N = 370$ ; and  $> \pounds 40K = 49.8\%$ ,  $N = 445$ . Average age was 35 years ranging from 21-57 years. Thirty-nine per cent of women lived with overweight and 61% with obesity. The FFB score was calculated for the 856 of 892 participants who provided complete dietary information (Mean  $\pm$  SD =  $3.03 \pm 0.42$ , range: 1.9-4.6). There was no statistically significant association between FFB score and ethnicity.

There was a significant relationship between the FFB score and household income (0.015,  $P = 0.025$ , CI = 0.002–0.028), with women from higher incomes having higher FFB scores.

Our results from a large, socioeconomically diverse sample of women with overweight or obesity in the postpartum period showed that mothers from higher income households consumed more fibre and less fat. This is consistent with results of national surveys highlighting the income gradient in food habits and in meeting dietary guidelines among women in the UK<sup>(3)</sup>. Addressing these dietary inequalities will require concerted action from a wide range of stakeholders.

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### References

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