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## Women's experience of body weight management during and post-pregnancy: a mixed methods approach

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Optimal gestational weight gain (GWG) during pregnancy is required for healthy foetal growth, however excessive GWG has been linked with adverse effects including increased risk of caesarean delivery and postpartum weight retention<sup>(1)</sup>. Currently no UK GWG guidelines exist, and women are not routinely weighed throughout pregnancy; consequently, women's understanding of GWG remains poor<sup>(2)</sup>. The aim of this study was to explore factors influencing weight change during and post-pregnancy, plus identify potential opportunities that could help women manage weight during this period.

Women aged 18–45 years-old who had a full-term, singleton, uncomplicated pregnancy within the last 3 years were recruited from mother and toddler groups, advertising on social media platforms and a university-wide email sent to staff and students. 108 eligible women completed the online questionnaire, between April and June 2023, on their experience regarding changes in body weight during and post-pregnancy. Follow on focus groups were then conducted within the same population. 4 focus groups with 2–5 participants per group and a 1–2–1 interview (n = 13 participants) were conducted online between September and October 2023, using a semi-structured topic guide. Discussions ranged between 32 to 90 minutes (average 59 minutes), were audio recorded, transcribed verbatim and thematically analysed<sup>(3)</sup> using NVivo12 software, with each theme being assigned to one level of the ecological model<sup>(4)</sup>. Ethical approval was granted by Ulster University's Research Ethics Committee.

Respondents reported in the online questionnaire, they did not receive enough information around weight management during (81.5%) and post-pregnancy (86.1%). Barriers to managing weight during and post-pregnancy were identified at each level of the ecological model. At the intrapersonal level (n = 4 themes), namely: changes in diet (convenience foods/ snacks), priorities (priority on the baby), lack of knowledge (not aware of adverse effects) barriers to physical activity (tired). At the interpersonal level (n = 3 themes), namely: lack of time (parity, working mum), conflicting advice (friends and family), lack of support (lack of support at appointments). At the environment and society level (n = 3 themes), namely: COVID-19 pandemic (amenities closed), location (rural communities), societal expectations. At the institutional and policy level (n = 1 theme), namely: system failing (lack of follow-up care). Potential strategies to help manage weight were also identified, at the intrapersonal level (n = 1 theme), namely: need for further information (components of GWG), interpersonal level (n = 1 theme), namely: support groups. At the environment and society level (n = 1 theme), namely: messaging (realistic expectations), institutional and policy level (n = 2 themes), namely: regular weighing, and further follow-up care.

In conclusion, mothers report receiving insufficient information around weight management, with barriers identified at each level of the ecological model highlighting that support is needed on multiple levels during and post-pregnancy, with potential strategies identified to assist mothers which informs future studies.

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