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# Using mixed methods to explore dietary intake in women with recurrent miscarriage: integrating Participant Public Involvement in the research design

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Recurrent miscarriage (RM) is defined as 3 or more consecutive pregnancy losses, prior to 24 weeks gestation<sup>(1)</sup>. In the UK, RM currently affects 1 in 100 (1%) of couples who are trying to conceive<sup>(2)</sup>. At present there is limited information regarding the role of nutrition in the occurrence of RM and on the dietary intake of women who have experienced RM. Thus, investigating links between dietary intake, gene expression, and pregnancy outcomes is crucial. Public and Patient Involvement (PPI) is considered important in health research since it enhances the quality, relevance, impact, and integrity of research activities<sup>(3)</sup>. RM is a sensitive issue, so incorporating the views of service-users in the research design is important. The main aims of this study were to understand the views of women with RM on the proposed research and to strengthen the design by integrating their suggestions.

The main study will aim to use mixed methods to explore the dietary intake of women with RM to determine if there is a relationship between achieving Dietary Reference Values or not, placental health, and pregnancy outcomes (if pregnancy is achieved). For PPI, women were recruited from a specialised recurrent miscarriage clinic in a hospital located in North-West England. Four women participated in a virtual PPI session and were asked for their views on the proposed research design. The session was recorded and transcribed using Microsoft Teams transcription. The researcher initiated the session by presenting a breakdown of the study design, followed by an explanation of its aims and rationale. Participants were queried about their perspectives on the study design through a series of questions. Participants were sent a £20 e-voucher, aligning with INVOLVE guidelines<sup>(3)</sup>.

Participants stressed the significance of the research given the absence of nutrition guidance for women with RM. They approved the sensitive recruitment approach and expressed interest in joining the study. However, concerns emerged regarding women who have experienced RM following IVF treatment, and whether they would be 'eligible for inclusion or not'. Participants suggested extending the food diary duration from 3 to 5 days for better accuracy in reflecting their eating habits. This was not viewed as overly burdensome, and they suggested that such activities could serve as 'a distraction' during 'early pregnancy anxiety'.

A limitation of this study was the small number of participants. However, this PPI approach further strengthened the research design, as the study design was revised to integrate the suggestions made by the women, including aligning the eligibility criteria to include women who had undergone IVF and experienced RM. Additionally, the food diary duration was extended from 3 to 5 days, which will result in the collection of better-quality dietary data, without risking compliance fatigue.

## References

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