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Consumer knowledge and perceptions of the nutrition content, sustainability and price of non-dairy, plant-based milk products: a mixed-methods approach

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Plant-based diets are gaining popularity with consumers looking to improve their health and animal welfare, whilst impacting the environment by reducing global emissions^(1,2). The UK plant-based food retail market is growing alongside consumer consumption rates; however, there is a scarcity of literature in relation to consumer perceptions of nutrition, sustainability and price of plant-based milk (PBM) alternatives⁽³⁾ highlighting the need for further research. The present study aimed to ascertain UK PBM consumers' knowledge and perceptions of PBM nutrition content, sustainability and price using a mixed methods online survey.

Ethical approval was granted by the LJMU, School of Sport and Exercise Sciences Ethics committee (22/SPS_SLB/ NU/001). Quantitative data were analysed using Kruskal-Wallis, one sample t-test, one-way ANOVA, Mann-Whitney U and Chi-squared tests (SPSS V28, New York). Qualitative data were analysed using Braun and Clarke's six-step approach to thematic analysis⁽⁴⁾. Participants were recruited using social media platforms and snowball sampling.

A total of 101 UK PBM consumers completed the questionnaire. Our quantitative findings showed the length of time people had been consuming PBM differed with age and people aged over 70 were significantly more likely to have consumed PBM for over 10 years ($p < 0.001$). Surprisingly, there were no significant differences shown for sex, educational status and income on perceptions of PBM in relation to nutritional value, sustainability and price. We found six qualitative themes 1) Lack of knowledge; 2) Quality of PBM; 3) Adequacy for human health; 4) Justifiability of product; 5) Appropriate promotion techniques; 6) Environmental concerns. Most of the participants' stated PBM products were an adequate alternative to dairy milk for nutritional value and sustainability, although there was a lack of knowledge for some 'No idea what nutrients in them are!' (response 42, male, aged 25–39), 'I don't really look or think about the nutritional content' (response 99, female, aged 18–24). There was disagreement on the fairness of retail price of PBM alternatives and whether cost justifies its nutritional benefits, with the majority believing the products are overly expensive. However, there was some justification, 'some people don't have a choice but to consume dairy alternatives, so that wouldn't be fair to make them pay more' (response 2, male, aged 18–24). 'I understand the production process may require more costs' (response 61, female, aged 25–39).

To conclude, the majority of PBM consumers believe the product is a nutritious and sustainable alternative to dairy milk. However, there was a lack knowledge in relation to nutritional adequacy. We also showed consumers' opinions of the retail price of plant-based milk alternatives were mixed, with the majority believing the product was expensive. Further research is needed to evaluate consumer perceptions and knowledge of PBM milk alternatives in a wider population.

References

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