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Sensory appeal and acceptance of a novel food intervention programme for older adults living with dysphagia

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Approximately 60% of older adults living in residential care live with dysphagia (difficulty chewing and swallowing)⁽¹⁾ and require texture modified foods (TMF). Despite the International Dysphagia Diet Standardisation Initiative (IDDSI), foods are often prepared with variation in texture, flavour, and consistency leading to further swallowing difficulties and safety concerns⁽²⁾. Nutritional quality of food is detrimentally impacted by modifying texture of food due to overcooking and addition of liquid to adhere to guidelines leading to malnutrition risk.

Specially prepared, sensory rich, nutrient enhanced TMF could positively impact nutritional status and wellbeing of those living with dysphagia (Balesteros-Pomar et al. 2020). A novel food intervention programme (NFIP) (Dysphameal™) has been developed using food technology solutions to thicken food using proteins. Zanini et al.⁽³⁾ evaluated this novel food intervention and identified positive clinical outcomes in Italy, but to date no work has evaluated this product from a sensory and food experience perspective. This qualitative pilot study aimed to understand the sensory appeal, and acceptance of the novel food intervention programme (NFIP) for older adults living with dysphagia.

Carers (n = 9, aged 30-60 years) were recruited independently of the workplace; with the condition they had or were currently supporting older adults living with dysphagia. Additionally, healthy, independent, older adults (n = 9, aged 65 years and over) were recruited to represent comparable sensory aptitude to a similar age group living with dysphagia. Samples (n = 6 flavours) of selected NFIP were available for participants to taste during semi structured interviews. Interviews were recorded and transcribed. Data collection and analysis used Braun and Clark's⁽⁴⁾ six stage thematic analysis until data saturation had been reached.

Three themes arose to understand sensory appeal, and acceptance of the NFIP:

- Negative sensory experience comprised of taste (bland, lack of seasoning, after-taste), texture (starchy, comparable to wallpaper paste, dependent on serving temperature), smell and visual appearance, primarily colour.
- Performance of the products included acceptability, meeting expectations, ingredient suggestions to improve sensory characteristic especially flavour.
- Acceptability of individual products varied.

The NFIP provides an opportunity to boost nutritional intake and be incorporated as part of a hybrid food delivery service to replace hard to puree, nutritionally dilute foods, especially bland products such as rice and pasta to serve alongside fresh counterparts and, reduce risk of malnutrition for those living with dysphagia. Opportunities exist to further develop this type of texture modified food product to improve palatability, enhance flavour, and appearance characteristics for those living with dysphagia, through advances in molecular gastronomy, controlling antioxidant activity and loss of volatiles.

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References

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