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Perceptions of Food Processing and Healthiness; The Role of Adult Eating Behaviours and UPF Literacy

Cross-sectional online survey of UK adults (n = 72)



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Aim:

To investigate how adult eating behaviour traits and ultra-processed food (UPF) literacy influence perceptions of food healthiness and level of processing among UK adults.

Introduction:

- Ultra-processed foods contribute substantially to UK diets and are a growing public health concern[1].
- Consumers often use perceived processing as a heuristic when judging food healthiness[2].
- Individual differences in eating behaviour traits (e.g. food responsiveness, emotional eating) influence food choices and responses to food cues, which may shape how foods are perceived and evaluated[3].
- However, how **eating behaviour traits and UPF literacy** together **influence food perceptions** remains **underexplored**.

Methods:



- Online cross-sectional survey of UK adults.
- Participants rated six foods varying in processing level (4-point scale) and healthiness (5-point scale)[2].
- Eating behaviour traits measured using the Adult Eating Behaviour Questionnaire (AEBQ)[4] ; UPF literacy (knowledge, awareness, confidence identifying UPFs), and decision criteria were also measured.
- Analyses included descriptive statistics, Friedman tests and Spearman's correlations.

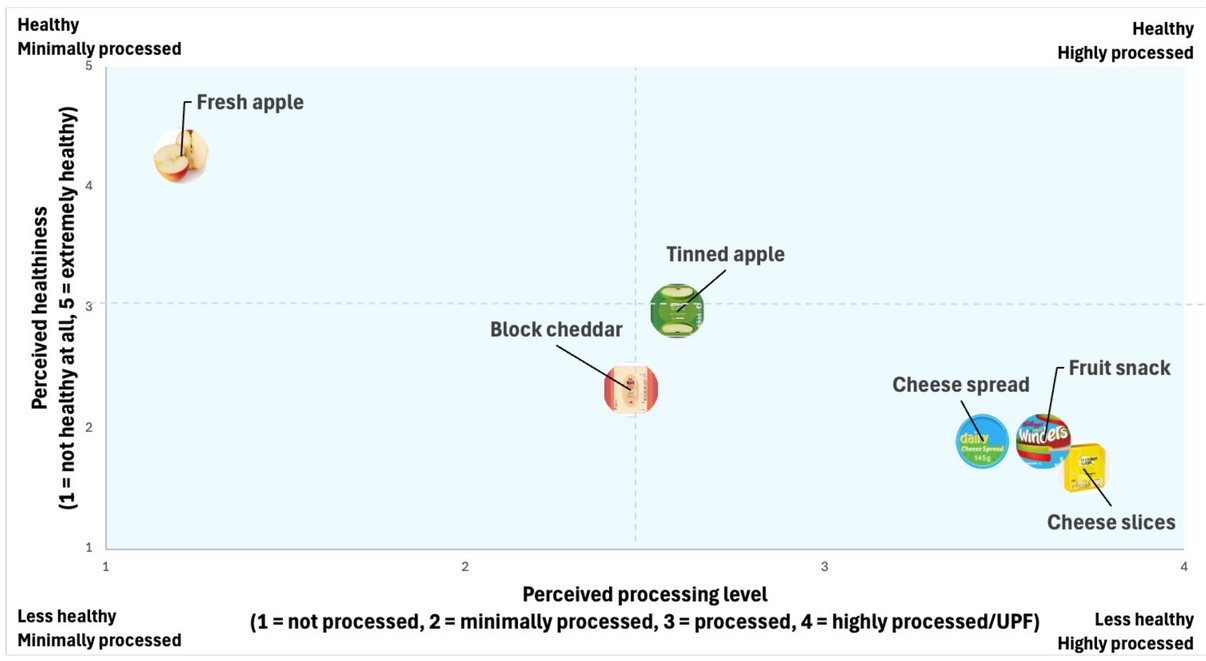
Table 1: Survey participant characteristics (N = 72)

Participant Characteristics (n = 72)			
Characteristic	**n (%)**	**Characteristic**	**n (%)**
Gender		**Education**	
Female	42 (58)	University degree or higher	33 (46)
Male	27 (38)	A-level equivalent	32 (44)
Prefer not to say	3 (4)	Below A-level	7 (10)
Age group		**UPF Awareness**	
18–24	41 (57)	Heard of UPF	67 (93)
25–44	23 (32)	Know what UPF are	50 (69)
45+	8 (11)	Confident identifying UPF	39 (54)

Results:

- **Participants exhibited moderate levels across most eating behaviour traits**, with the highest mean score for enjoyment of food (M = 4.03, SD = 0.76) and the lowest for food fussiness (M = 2.04, SD = 0.84).
- **Perceived healthiness and processing ratings differed significantly across products** ($p < 0.001$). Fresh apple was rated the least processed and most healthy, while fruit snacks and processed cheese products were rated more processed and less healthy (Figure 1).
- **Moderately processed foods (e.g., block cheddar, tinned apple) were still perceived as relatively healthy**, suggesting consumers do not consistently equate processing with unhealthiness.

Figure 1: Perceived healthiness and processing ratings for food products



Key finding: When averaged across all products, perceived processing was not significantly associated with perceived healthiness ($r = 0.20$, $p = 0.100$), indicating that processing was not used as a consistent overall heuristic. However, product-level patterns varied: some moderately processed foods (e.g., block cheddar, tinned apple) were still perceived as relatively healthy (Figure 1).

Figure 2: Distribution of perceived processing classifications (NOVA categories) for each food product (N = 72).

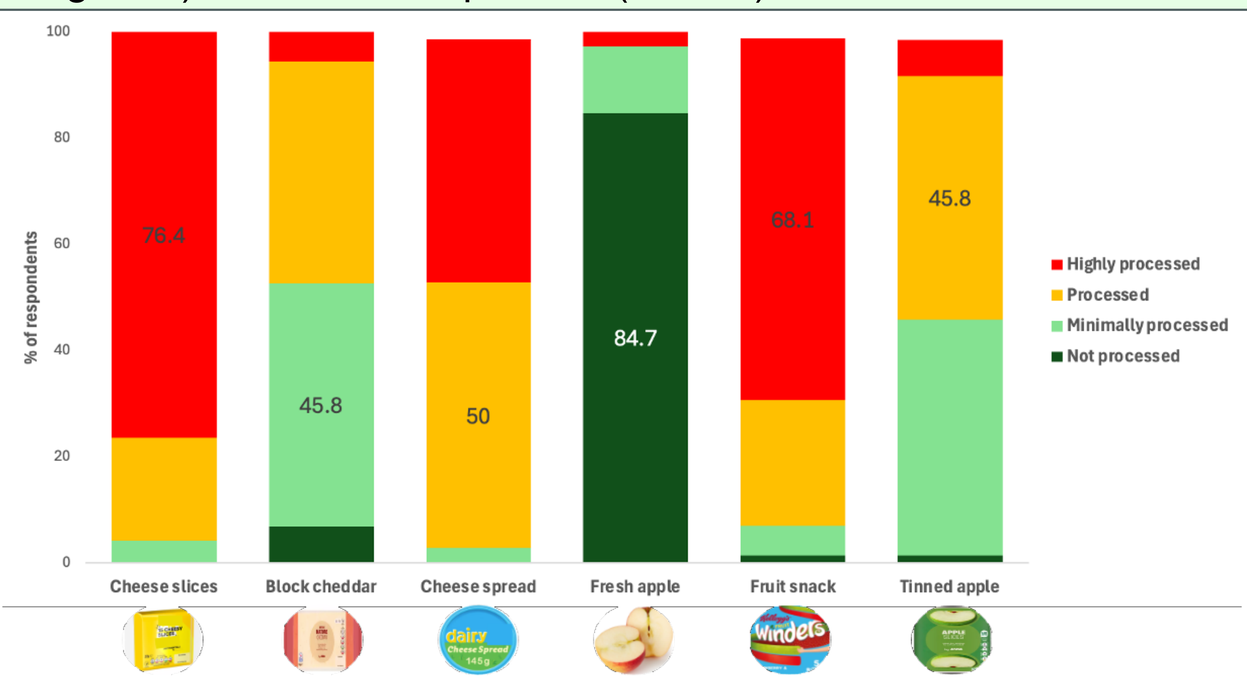


Table 2: Pearson correlations between eating behaviour traits and mean perceived healthiness ratings.
r represents the Pearson correlation coefficient indicating the strength and direction of the relationship; p represents statistical significance.

AEBQ Trait	r	p
Food Responsiveness	0.219	0.065
Emotional Undereating	-0.003	0.978
Emotional Overeating	-0.069	0.567
Enjoyment of Food	0.142	0.236
Food Fussiness	-0.004	0.976

Conclusion:

- Perceived healthiness was not consistently driven by processing level and varied by product.
- Eating behaviour traits were not significantly associated with perceived healthiness, indicating limited influence on food evaluation.
- These findings suggest that food evaluations are product-specific rather than driven by a single processing heuristic, with implications for public health communication around UPFs.
- A limitation is the relatively small, demographically skewed sample (n = 72), which may limit generalisability.

References

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