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DIGITAL FOOD ENVIRONMENTS AND EATING BEHAVIOUR IN YOUNG ADULTS: A BEHAVIOURAL NUTRITION FRAMEWORK FOR HEALTHIER DIETARY CHOICES

Review Article

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Abstract

Digital food communication—including social-media posts, influencer content, online advertising, recipe videos, and nutrition advice—has become an important part of the information environment in which young adults make dietary decisions. Its influence is not uniform: content can increase awareness and motivation, but it can also promote confusing, commercialized, restrictive, or misleading messages. This narrative review synthesizes recent research on digital food communication, interpersonal influences, behavioural theory, and healthy-diet guidance to develop a practical framework for nutrition education and intervention design. Recent systematic evidence suggests that digital food communication can affect young adults' nutrition-related cognition and behaviour, while barriers include difficulty distinguishing reliable advice from misinformation and a gap between intentions and everyday action. Dietary behaviour is also shaped by family, peers, affordability, food availability, culture, and time constraints. The review proposes an integrated model combining media and nutrition literacy, achievable behavioural goals, supportive social norms, practical food skills, and healthier choice environments. It recommends co-designed, culturally appropriate digital interventions that are transparent about sponsorship, avoid weight stigma, and assess actual dietary behaviour rather than engagement metrics alone. This article is a narrative synthesis and conceptual framework; it does not report new participant data or a new systematic search.

Keywords: *behavioural nutrition; digital food communication; young adults; dietary behaviour; nutrition literacy; social media; food environment*

1. Introduction

Dietary behaviour is shaped by more than knowledge of nutrients. Food choices emerge from the interaction of individual preferences, habits, emotions, social relationships, cultural expectations, economic resources, and the environments in which food is purchased and consumed. Young adulthood is a particularly important period because many people experience changes in independence, residence, study, employment, and social networks. These transitions can alter meal routines, cooking opportunities, and exposure to commercial food messages.

Digital platforms add another layer to this environment. Social media can make recipes, nutrition information, peer experiences, and health campaigns widely accessible. At the same time, promotional content may blur the boundaries between education and advertising, and conflicting claims can make it difficult to judge credibility. A 2025 mixed-methods systematic review of 45 studies involving 8,914 young adults across 16 countries reported that digital food communication was associated with changes in nutrition-related cognition and behaviour, while identifying challenges in distinguishing helpful from misleading information and translating intentions into action (Parks et al., 2025).

The World Health Organization (WHO) describes healthy diets through the principles of adequacy, balance, moderation, and diversity, while emphasizing that dietary patterns are influenced by affordability, culture, preferences, and food environments (WHO, 2026). Therefore, nutrition interventions that rely solely on telling people what to eat may overlook the conditions that enable or constrain behaviour. This review examines the relationship between digital communication and eating behaviour and proposes a framework for practical, equitable nutrition promotion.

2. Review Approach

This article uses a narrative review and conceptual synthesis. It draws on recent peer-reviewed reviews concerning digital food communication, interpersonal determinants of diet, behavioural interventions, and official healthy-diet guidance. Evidence was organized thematically around digital exposure, social influence, behavioural mechanisms, and environmental constraints.

The approach was not a prospectively registered systematic review. It did not use an exhaustive database search, duplicate independent screening, or formal risk-of-bias assessment, and it does not calculate pooled effects. Accordingly, the article should be read as a structured narrative synthesis rather than a systematic review or meta-analysis. No new survey, experiment, or participant-level dataset was collected.

3. Digital Food Communication as a Behavioural Influence

3.1 Potential benefits

Digital communication can provide convenient access to recipes, food preparation demonstrations, culturally relevant meal ideas, and information about dietary quality. Short videos and visual demonstrations may help translate abstract advice into practical steps, such as preparing low-cost meals, increasing vegetable variety, or reading food labels. Online communities can also provide social support, shared goals, and accountability when participants feel safe and respected.

These benefits depend on the quality and relevance of the material. Content that uses accessible language, realistic ingredients, familiar cooking methods, and achievable goals is more likely to be actionable than advice that assumes unlimited time, money, equipment, or specialist knowledge.

3.2 Misinformation, commercial influence, and conflicting advice

The digital environment can also circulate exaggerated health claims, unsupported supplement recommendations, restrictive diets, and oversimplified messages about weight or individual foods. Influencer content may be sponsored, yet commercial relationships are not always obvious to viewers. Repeated exposure can make a claim feel familiar without making it accurate. Nutrition education should therefore teach users to identify the source, check the evidence, distinguish personal experience from clinical guidance, and recognize advertising.

Parks et al. (2025) identified difficulty deciphering sound nutrition advice and balancing intentions with actual behaviour as barriers in digital food communication. These findings support interventions that develop critical evaluation skills alongside practical planning, rather than treating exposure or engagement as evidence of improved dietary health.

3.3 Engagement is not the same as behaviour change

Likes, views, shares, and time spent watching are convenient platform metrics, but they do not establish that people changed what they eat. Evaluation should distinguish reach and engagement from knowledge, intentions, food purchasing, meal preparation, dietary intake, and longer-term maintenance. Where feasible, self-reported measures can be combined with validated dietary assessment tools and follow-up measures, while acknowledging recall and social-desirability bias.

4. Social and Interpersonal Determinants of Eating

Family routines, parental modelling, peer norms, household resources, and shared meals can influence what people prefer and consume. A systematic scoping review of people aged 13–30 mapped a broad range of interpersonal determinants, including family food culture, social influences, parental behaviours, social support, and family resources; it also noted gaps in longitudinal evidence and research involving emerging adults outside university settings (Braune et al., 2025).

These influences can operate in both directions. Friends may normalize frequent consumption of highly processed snacks, or they may encourage shared cooking and more varied meals. Families can pass on

food preferences and cooking skills, but household schedules and budgets may limit options. Interventions should avoid assuming that individuals make choices independently of their social context. Digital programmes can use social support constructively by inviting participants to set shared goals, exchange affordable recipes, or practise food preparation together. However, public weight-loss competitions, food shaming, and moral labels such as 'good' or 'bad' eater can reinforce stigma and should be avoided. Social comparison should be designed carefully, with an emphasis on supportive behaviours rather than body size.

5. Behavioural Theory and Practical Nutrition Interventions

Behavioural theories help explain why information alone often fails to produce sustained change. Interventions can draw on several complementary ideas: perceived capability, expected outcomes, social norms, habit formation, environmental cues, and self-regulation. These constructs should guide intervention design and evaluation rather than appear only as labels in a proposal.

5.1 Capability and food skills

Capability includes the knowledge and practical skills needed to act. Cooking demonstrations, meal-planning exercises, food-label activities, and budget-sensitive shopping examples can convert general recommendations into achievable actions. A 2025 systematic review of behavioural theory in adult cooking interventions emphasized the importance of understanding how theory is used in intervention development, evaluation, and interpretation (Tucker et al., 2025). Cooking programmes should therefore specify the skills they intend to change and measure whether participants can apply them.

5.2 Opportunity and choice architecture

Opportunity refers to whether a healthier action is feasible in a person's physical and social environment. Price, availability, transport, kitchen access, time, and food-service options can constrain choice even when motivation is high. WHO guidance highlights policy and environmental measures such as school food programmes, understandable nutrition labelling, counselling, and choice-architecture interventions (WHO, 2026). Digital advice should acknowledge these structural factors and provide alternatives rather than implying that all barriers are personal failures.

5.3 Motivation, goals, and habit formation

Motivation can be strengthened by personally meaningful goals, feedback, planning, and a sense of progress. Goals should be specific and manageable—for example, adding a vegetable to one meal on several days each week, preparing a simple breakfast in advance, or replacing some sugar-sweetened drinks with water. These examples should be adapted to individual needs, local food availability, culture, and clinical circumstances.

Habit formation requires repetition in a stable context. Prompts, shopping lists, meal preparation routines, and reminders can support repetition, but excessive notifications may create fatigue. Users should be able to control message frequency and choose goals that fit their circumstances.

6. A Proposed Integrated Framework

Based on the reviewed themes, this article proposes a five-part framework for digital behavioural nutrition interventions:

1. Media and nutrition literacy: help users evaluate sources, identify sponsorship, check claims, and understand basic dietary principles.
2. Practical capability: provide affordable recipes, food preparation skills, shopping guidance, and culturally appropriate examples.
3. Social support: encourage non-stigmatizing peer and family support, shared cooking, and positive social norms.
4. Environmental opportunity: acknowledge food prices, availability, time, equipment, and institutional food settings; connect users with feasible alternatives.

5. Feedback and evaluation: measure dietary behaviours and maintenance alongside reach, engagement, knowledge, and intentions.

The framework is intended as a design and evaluation aid, not as a validated instrument. Its components should be adapted and tested with the intended population. Co-design with young adults can identify relevant platforms, language, barriers, and acceptable forms of support before large-scale implementation.

7. Implications for Public Health and Nutrition Education

Schools, universities, primary-care services, community organizations, and public-health agencies can use digital channels to complement face-to-face nutrition education. Effective programmes should combine accurate content with opportunities to practise skills, ask questions, and receive support. Content should be accessible to users with different literacy levels and should avoid assuming that expensive ingredients or specialist products are necessary.

Public institutions can strengthen trust by publishing transparent editorial standards, citing reliable guidance, disclosing sponsorship, and correcting errors promptly. Partnerships with commercial platforms require safeguards against conflicts of interest. Content moderation and referral pathways are particularly important when users disclose eating disorders, severe food insecurity, or medical conditions requiring individualized dietary advice.

For lower-resource settings, locally available foods, seasonal produce, pulses, whole grains, and familiar cooking methods may provide more useful examples than imported diet trends. WHO and FAO guidance emphasizes that healthy dietary patterns vary by culture and local availability while retaining core principles of adequacy, balance, moderation, and diversity (FAO & WHO, 2024).

8. Recommendations for Future Research

- Conduct longitudinal studies to examine whether digital food exposure predicts sustained changes in dietary behaviour rather than short-term intentions alone.
- Report intervention theory explicitly, showing how each component is expected to influence a measurable outcome.
- Include participants outside university settings and from diverse socioeconomic, cultural, and geographic backgrounds.
- Assess affordability, food access, cooking facilities, and time constraints as moderators of intervention effectiveness.
- Distinguish organic content from paid promotion and evaluate whether sponsorship disclosures improve users' ability to assess credibility.
- Use validated dietary measures and follow-up assessments while reporting attrition, missing data, and limitations of self-report.
- Measure potential harms, including food anxiety, weight stigma, disordered eating risk, misinformation exposure, and digital exclusion.

Research should also investigate how digital interventions interact with policies and settings beyond the individual. If healthier foods are unaffordable or unavailable, an intervention that increases knowledge may not substantially change intake. Mixed-methods research can help explain why an intervention works in one context but not another.

9. Discussion

The reviewed evidence suggests that digital food communication is best understood as one influence within a wider behavioural system. It can increase awareness and provide practical resources, but its effects depend on credibility, social context, capability, and opportunity. The evidence on interpersonal determinants further indicates that eating behaviour is embedded in relationships and household

circumstances, while behavioural-intervention research highlights the need to make theory operational in programme design.

A key implication is that digital nutrition promotion should not be evaluated solely through online engagement. An intervention may attract many views yet fail to change food purchasing or dietary intake; conversely, a small community programme may achieve meaningful practical changes among participants. Evaluation plans should define the pathway from exposure to outcomes and measure each stage where possible.

The framework also emphasizes equity. Advice that assumes flexible schedules, safe kitchens, stable income, and easy access to diverse foods may unintentionally exclude those facing the greatest constraints. Culturally responsive, affordable, and non-stigmatizing design is not an optional addition but a condition for relevance. Still, the proposed framework remains conceptual and requires empirical testing before its effectiveness can be claimed.

10. Conclusion

Digital food communication offers opportunities for nutrition education, practical skill-building, and social support, but it also exposes young adults to commercial pressure, conflicting advice, and misinformation. Dietary behaviour reflects an interaction among individual capability, motivation, social relationships, and the food environment. A more effective approach combines nutrition and media literacy with affordable practical guidance, supportive social norms, feasible goals, and structural attention to food access. Future interventions should be co-designed with diverse young adults, grounded in explicit behavioural theory, and evaluated using meaningful dietary outcomes and follow-up. The proposed framework offers a starting point for research and programme development, but it should be tested across different populations and settings.

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