

## INTRODUCTION

The USDA estimates that nearly 60% of all Americans have at least one diet-related chronic disease.<sup>1</sup> Food choices are influenced by a wide variety of intrinsic and extrinsic factors. This combination makes information on proper nutrition overwhelming and challenging to access. Identifying factors that affect food selection is crucial for offering guidance to simplify and better food choices.

## PURPOSE OF STUDY

This review examines factors influencing nutrition decision-making to guide the development of a mHealth app that helps users make healthy food choices. By synthesizing research on intrinsic and extrinsic influences, this study aims to address public health challenges like obesity, diabetes, and malnutrition by examining why and how food choices are made.

## METHODS

- Sources: PubMed and NIH National Library of Medicine; key search terms related to nutrition decision-making were utilized.
- Screening process: 5 reviewers independently screen abstracts and titles. (n = 32)
- Inclusion criteria: (1) studies published in English; (2) studies published within the previous 15 years; and (3) studies focused on a relevant aspect of food: physical characteristics, environmental factors, and socio-economic status. Randomized trials, cohort studies, and population research were eligible for review. (n = 19)
- Exclusion criteria: Reviews with a purpose that deviated from nutrition decision-making were excluded.
- Qualitative analysis: Thematic and content analysis.
- Study #2024-10-10\_0756: exempt per UK IRB as Not Human Subjects Research [45CFT 46.102(e)(1)]



- **42%** of adults have obesity<sup>2</sup>
- **\$170 billion** in associated medical costs<sup>2</sup>
- Poor diet contributes to **~10.9 million** deaths annually<sup>2</sup>
- **\$33 billion** spent on weight loss products, **<5%** are successful in attaining health or weight loss goals<sup>2</sup>

## RESULTS & INTERPRETATIONS

### Food-Related Features

- **Food marketing** utilizes brand recognition and direct food cues to relay perceptual information to stimulate instinctual food decision-making.<sup>6,10</sup>
- **Direct-to-consumer marketing** and advertising shapes food purchasing.<sup>4,6</sup>

### Society-Related Features

- Food advertising, celebrity promotions, and appearance-related content on **social media makes healthy food choice difficult.** <sup>6,10,11</sup>
- **Socioeconomic status** is attributed to accessibility and affordability of health.<sup>6,9,12,14</sup>
- **Nudging**—tactics used to influence consumer purchasing—can be used to improve food choice behavior.<sup>12,13</sup>

### Individual Differences: Personal State

- **Gene variant and dysregulation of neuromodulators and hormones** are involved in food intake regulation and preference.<sup>3,5</sup>
- The brain's **reward pathway** and dopamine production are impacted by food.<sup>16</sup>
- **Physiological distress** is associated with impaired decision making, negatively impacting resilience to healthy diet.<sup>16</sup>

### Individual Differences: Cognitive State

- **Food literacy** impacts an individual's ability to make healthy food choices.<sup>17</sup>
- **Food neophobia** contributes to an individual's food preference and dietary decision-making.<sup>18</sup>
- **Parental motives** drive the dietary habits of their children.<sup>19</sup>
- **Sustained motivation and ongoing self-regulation** are needed for successful behavioral modification and new habit formation.<sup>20</sup>

## DISCUSSION

Sensory stimulation strongly influences food choice at point of sale

Marketing and advertising can stimulate biological processes, bypassing higher-order decision making

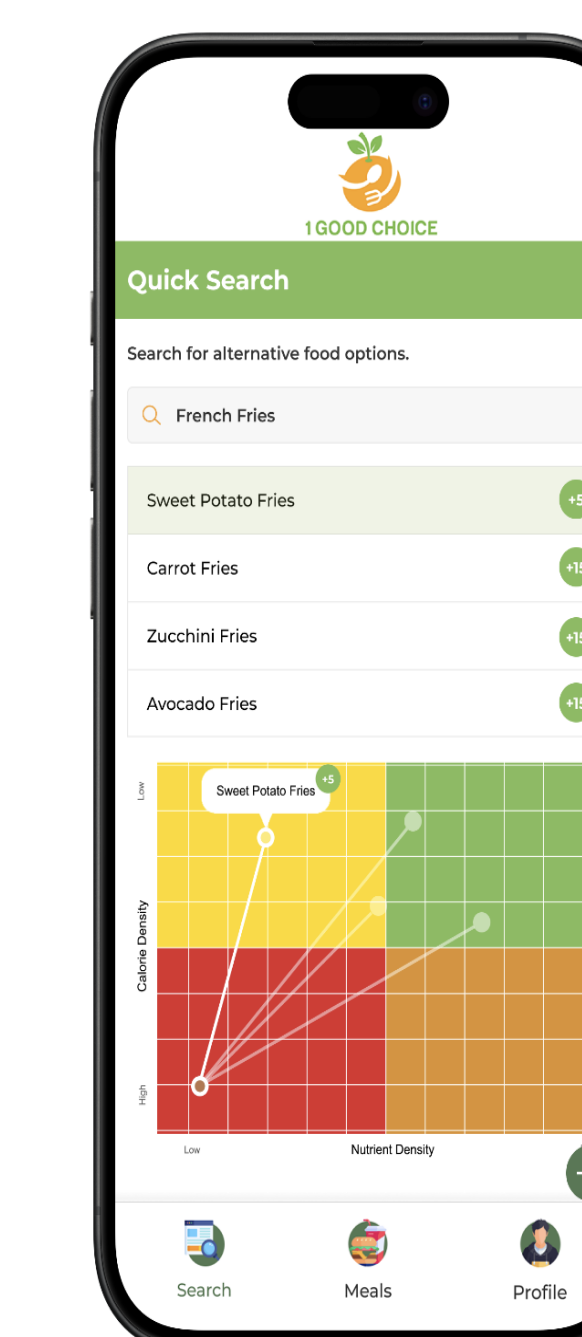
Genetics, hormones, and mental well-being play a role in adherence to dietary change

Food literacy and habits strongly determine dietary behavior patterns

## CONCLUSION

- Empowering healthcare providers to better support patients in making informed food choices can improve health outcomes.
- By addressing gaps in motivational support, leveraging community resources, and developing user-friendly digital tools such as the *1 Good Choice app*, providers can guide patients in forming sustainable, healthier habits. This ultimately enhances long-term well-being and reduces the burden of chronic disease.
- Limitations: Contemporary review with limited articles selected; two databases were utilized.
- Implications for future research: Maintaining resilience in healthy nutrition choices, habit reversal, and the role of digital tools in sustaining long-term dietary changes.

## 1 GOOD CHOICE APP SIMULATION



## REFERENCES

