

# Exploring the relationship between cooking and food skills and food choice motives: a cross-sectional study

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Received 20 November 2025

Revised 26 February 2026

8 April 2026

Accepted 16 April 2026

## Abstract

**Purpose** – This study examined how adult cooking skills (CS) and food skills (FS) are associated with specific food choice motives among adults in Türkiye, where gender roles strongly shape home cooking.

**Design/methodology/approach** – A cross-sectional survey was conducted in April 2024 with 759 adults aged 18–64 who cooked at home at least occasionally, recruited via non-probability, gender-stratified quota sampling. Data were collected through face-to-face interviews in supermarkets immediately after grocery shopping, using the Cooking and Food Skills Confidence Measure and the Food Choice Questionnaire (FCQ). Nonparametric tests and multiple linear regression analyses adjusted for sociodemographic and planning-related factors were used.

**Findings** – Higher CS and FS scores were positively related to the FCQ total score. CS showed stronger associations with convenience, mood, sensory appeal and price, whereas FS was more closely related to health, natural content, weight control, familiarity, ethical concerns and price. Overall, CS aligned more with convenience- and pleasure-related motives, while FS was more strongly embedded in health-, ethics- and control-oriented motives.

**Research limitations/implications** – The cross-sectional design and use of self-report measures prevent causal inferences between cooking/food skills and food choice motives. Non-probability, gender-stratified quota sampling in a single province and the focus on adults who cook at home limit generalisability to the wider adult population. Ecological validity is also restricted because actual food purchases and dietary intake were not observed. Future research should use longitudinal and observational designs in more diverse settings and incorporate environmental, social and economic determinants of food choice.

**Practical implications** – The findings suggest that cooking and food skills should be treated as distinct targets in nutrition education and public health interventions. Programmes that build food skills such as meal planning, shopping list use, budgeting and food label literacy may be especially effective for strengthening health-, natural content-, weight control- and ethics-related motives. In contrast, interventions for younger adults and time-pressed households may benefit from emphasising quick, tasty and affordable home cooking, linking convenience and sensory appeal with healthier meal options.

**Social implications** – By highlighting how cooking and food skills relate to different food choice motives, this study points to opportunities for more equitable and realistic food policies. Skill-based approaches that recognise gendered patterns in home cooking may help avoid placing disproportionate responsibility on women and instead support shared food preparation within households. Strengthening food and cooking skills, especially among younger and lower-resource groups, may contribute to healthier, more sustainable and cost-conscious eating in everyday life.

**Originality/value** – This study is among the first to map distinct cooking and food skill domains onto specific food choice motives in a large sample of home cooks in Türkiye. By linking differentiated skill sets to motivational profiles, the findings provide a basis for designing skill-based nutrition education and intervention strategies tailored to different demographic and motivational groups, particularly younger adults.

**Keywords** Cooking skills, Food skills, Food choice motives, Food choices

**Paper type** Research article



## 1. Introduction

Noncommunicable diseases (NCDs) are responsible for nearly three-quarters of global deaths (Chakrabarti *et al.*, 2025; World Health Organization, 2023). Among the major modifiable risk factors are unhealthy diets, physical inactivity, tobacco use, and harmful alcohol consumption. In response, ensuring adequate and balanced nutrition has become a global public health

priority, increasing the relevance of understanding consumer food choice behaviour (Chen and Antonelli, 2020; Kushitor *et al.*, 2025; Osaili *et al.*, 2023; Shah *et al.*, 2025). Although interest in healthy eating continues to increase, consumer decision-making regarding food remains complex and is shaped by interacting psychological, social, and contextual factors (Shah *et al.*, 2025). Recent evidence suggests that diet-focused behavioural interventions show mixed effects on dietary outcomes, highlighting the need to better understand the mechanisms underlying food-related choices (Chakrabarti *et al.*, 2025).

Food choice is largely considered to be a learned behaviour (Fernqvist *et al.*, 2024). The food choice process is defined as the process by which people choose, purchase, prepare, and consume food, and it is shaped by the effects of multiple factors (Karanja *et al.*, 2022; Shepherd and Raats, 2006). This process is shaped by the interaction of multiple factors, starting with individual characteristics and extending to interpersonal relationships, social norms, and the food environment (Chen and Antonelli, 2020; Fernqvist *et al.*, 2024; Karanja *et al.*, 2022; Tacad *et al.*, 2025). Individual factors consist of multidimensional individual motivations such as health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concerns (Steptoe *et al.*, 1995). Understanding these motives is important, as they provide insight into why individuals prefer certain foods and which levers may be most effective for nutrition education and behaviour change. A substantial body of research has examined food choice motives in relation to sociodemographic and psychosocial characteristics, such as age, gender, anthropometric indicators, self-efficacy and health locus of control, as well as broader contextual determinants (Alissa, 2024; Chen and Antonelli, 2020; Fernqvist *et al.*, 2024; Schliemann *et al.*, 2019; Stewart-Knox *et al.*, 2025; Tacad *et al.*, 2025). However, while food choice motives have been widely examined in relation to individual and contextual characteristics, less attention has been paid to the role of practical food-related competencies that may enable or constrain how these motives are enacted in everyday food choices. Cooking skills involve technical and sensory abilities such as chopping, mixing, and evaluating food during preparation, while food skills include broader competencies like meal planning, budgeting, shopping, and reading food labels (Lavelle *et al.*, 2017, 2020; McGowan *et al.*, 2017). While previous research has demonstrated that cooking and food skills are associated with healthier dietary outcomes, their relationship with specific food choice motives, representing the proximal determinants of food-related decisions, remains insufficiently explored, as prior studies have primarily examined these skills in relation to broader dietary outcomes rather than motivational dimensions of food choice (da Costa Pelonha *et al.*, 2023; Hartmann *et al.*, 2013; Mengi Çelik *et al.*, 2023; Tani *et al.*, 2020).

Food choice motives capture what individuals prioritise, but their influence on everyday food choices may depend on whether individuals have the practical capacity to act on them. Cooking and food skills may therefore be associated with which motives are more feasible in daily life. Examining food choice motives without considering these skills may thus provide only a partial account of food-related decision-making. Accordingly, the purpose of this paper is to examine the associations between cooking skills, food skills and food choice motives among adults who cook at home in Türkiye, and to assess whether these associations differ across specific motivational dimensions.

## 2. Conceptual background

### 2.1 Cooking skills and food skills in relation to dietary outcomes

A growing body of research has examined cooking skills and food skills as key determinants of dietary behaviour. Studies consistently show that individuals with higher levels of these skills are more likely to prepare meals at home and less likely to rely on fast foods and ultra-processed foods, whereas lower skill levels are associated with greater dependence on convenience foods (Bilbâie *et al.*, 2021; Dunn *et al.*, 2011; Lam and Adams, 2017). Improved cooking and food skills have also been linked to better control over meal composition, higher consumption of fresh foods, and overall improvements in diet quality, including lower intakes

of saturated fat, sugar, and sodium (Lam and Adams, 2017; Lavelle *et al.*, 2016; Mengi Çelik *et al.*, 2025). Interventional studies have demonstrated that enhancing these skills can increase fruit and vegetable intake across different populations (Garcia *et al.*, 2016; Bennett *et al.*, 2021; Metcalfe *et al.*, 2021; Williams *et al.*, 2023). Similar associations have been reported in studies in Türkiye examining relationships between cooking and food skills, highly processed food consumption, healthy eating attitudes, and adherence to dietary patterns such as the Mediterranean diet (Mengi Çelik *et al.*, 2023; Ünal, 2024). Similarly, broader constructs such as cooking readiness, which includes cooking skills, attitudes toward cooking, and food literacy, has been found to be associated with the consumption of foods with higher nutritional value (de Barcellos *et al.*, 2024). However, despite the consistency of these findings, existing research has predominantly operationalised cooking and food skills in relation to distal dietary outcomes, such as diet quality indices, food group intake, or adherence to dietary patterns, with limited attention to the decision-making process through which these skills shape food choices.

### 2.2 Food choice motives as drivers of food-related decisions

Food choice motives refer to the priorities individuals consider when selecting, purchasing and consuming foods. These motives encompass dimensions such as health, convenience, sensory appeal, price and ethical considerations, and play a central role in everyday food-related decision-making processes (Dunn *et al.*, 2011; Steptoe *et al.*, 1995).

Accumulating evidence indicates that food choice motives are meaningfully associated with actual dietary intake and overall diet quality. Specifically, stronger health- and future-oriented food choice motives have been shown to be positively associated with the consumption of healthier food groups, including fruits, vegetables and whole grains (Bénard *et al.*, 2024). In contrast, motives related to sensory appeal and convenience appear to exert more complex and, in some cases, negative influences on dietary quality, particularly with respect to dietary diversity and adequacy (Trinh *et al.*, 2023).

Importantly, food choice motives are not fixed preferences. Recent research demonstrates that motivational priorities vary substantially across eating contexts, such as meal type, place of consumption and social setting. For example, health and nutritional considerations tend to be more salient during main meals, whereas sensory appeal, convenience and momentary cravings become more dominant during snacking occasions or out-of-home consumption (Verain *et al.*, 2022). This contextual sensitivity highlights that food choice motives are shaped by situational factors rather than reflecting stable, context-independent orientations. Beyond contextual variation, previous research has also reported systematic differences in food choice motives across sociodemographic characteristics, including sex, age, education, socioeconomic position, household context and residential environment (Alissa, 2024; Salas-García *et al.*, 2025; Schliemann *et al.*, 2019; Tacad *et al.*, 2025). Together, this evidence underscores that food choice motives are dynamic constructs shaped by both contextual and sociodemographic factors and play a critical role in linking individual circumstances to dietary behaviour.

### 2.3 Linking cooking and food skills with food choice motives

Existing evidence suggests potential links between cooking and food skills and food choice motives, although these relationships are typically addressed indirectly. Practical constraints such as time availability interact with cooking-related practices in shaping food-related decisions, with perceived time pressure favouring quick meals, ready-to-cook ingredients and fast food (Dlamini *et al.*, 2023; Dunn *et al.*, 2011; Lavelle *et al.*, 2016) while economic considerations related to cooking costs have been shown to shift choices toward cheaper ready foods (Dlamini *et al.*, 2023). Beyond practical constraints, sensory appeal also represents an important motivational dimension related to cooking competence. Taste and flavor are consistently at the forefront of food choice; however, improved cooking skills can attenuate sensory barriers to healthy foods and strengthen positive attitudes towards home-cooked meals (Appleton, 2024).

Importantly, existing research implicitly points to a conceptual distinction between cooking skills and food skills, with lower skill levels being associated with preferences for convenient, ready-made foods, and broader food-related competencies such as label reading being linked to greater emphasis on health and natural content (Hartmann *et al.*, 2013; Joseph and Tan, 2023). These observations suggest that cooking and food skills may not only be related to food choice motives overall, but may also be associated with different motivational patterns, warranting their examination as distinct yet related constructs.

Taken together, evidence showing that food choice motives vary across contexts and individual characteristics (Alissa, 2024; Salas-García *et al.*, 2025; Schliemann *et al.*, 2019; Tacad *et al.*, 2025; Verain *et al.*, 2022), alongside studies suggesting that cooking and food skills may relate to different motivational priorities, indicates that food-related competencies could play a role in shaping food choice motives.

Existing literature has separately addressed the strong association between cooking skills and diet quality (García *et al.*, 2016; Lam and Adams, 2017; Mengi Çelik *et al.*, 2023, 2025) and the influence of food choice motives (health, convenience, sensory attributes) on eating habits (Bénard *et al.*, 2024; Dunn *et al.*, 2011; Tacad *et al.*, 2025; Trinh *et al.*, 2023), but the interaction between these two domains is not yet sufficiently elucidated. To address this conceptual gap, the present study was guided by the following research questions:

- RQ1. Are cooking and food skills associated with overall food choice motives and their specific dimensions?
- RQ2. Do cooking and food skills show different association patterns across food choice motives?

### 3. Methods

#### 3.1 Study design

This cross-sectional study was conducted in April 2024 and focused on adult consumers living in Kırklareli, Türkiye. According to the Turkish Statistical Institute, the population of the province was 377,156 in 2023, of whom 246,256 were aged 18–64 years; this age group formed the reference population for the study (Türkiye İstatistik Kurumu (TÜİK), 2023). The target population included adults aged 18–64 years who were at least occasionally involved in home cooking and food preparation, as these individuals significantly shape the household food environment. National data from Türkiye show that most domestic work, including cooking and daily cleaning, is performed by women (85.4%) (TÜİK, 2021). International studies also indicate that women are more likely than men to be primarily responsible for preparing meals at home and tend to cook more frequently (Fuller *et al.*, 2019; Taillie, 2018; Wolfson *et al.*, 2021).

Based on this evidence, the study used a non-probability, gender-stratified quota sampling strategy to reflect the expected gender distribution among adults who cook at home, aiming for an approximate 4:1 ratio of women to men (80% vs. 20%). The minimum sample size required to detect a small effect size ( $f^2 = 0.02$ ) with 95% power at  $\alpha = 0.05$  for a linear multiple regression model was calculated as 776 using G\*Power 3.1.9.4 (Faul *et al.*, 2007, 2009). To account for approximately 20% non-response or unusable data, the target sample size was set at  $N = 932$ .

The inclusion criteria were: being 18–64 years of age, residing in Kırklareli, and being at least occasionally involved in home cooking. Exclusion criteria included being younger than 18 or older than 64 years, having difficulties with reading or writing, having a self-reported diagnosed eating disorder or significant eating difficulties, submitting incomplete questionnaires, and never cooking at home.

Participants were recruited at the exits of large supermarkets and grocery stores in Kırklareli using non-probability, gender-stratified quota sampling. Data collection was

deliberately carried out immediately after participants had completed their food shopping in order to situate the survey in a naturalistic food choice context. Trained researchers approached adult customers as they left the store, briefly explained the purpose of the study, and screened them for eligibility. After applying all exclusion criteria, data from 759 participants were included in the final analysis (590 women, 77.7%; 169 men, 22.3%), which approximately matched the planned 4:1 ratio. Since the sampling strategy was non-probabilistic and targeted adults actively engaged in home cooking, the findings are not intended to represent the entire adult population. Instead, they reflect adults engaged in home cooking in this urban setting and should be generalised cautiously to similar groups and contexts. The use of self-report instruments to assess skills, motivations and behaviours also limits ecological validity, as it relies on participants' reports rather than directly observed food-related behaviours.

### 3.2 Data collection

Data were collected through face-to-face surveys. The completion of the questionnaire took approximately 15–20 min. The form consisted of four sections: (1) sociodemographic characteristics, (2) food-related practices (e.g. food purchasing and meal preparation routines), (3) Cooking and Food Skills Confidence Measure (Lavelle *et al.*, 2017), and (4) Food Choice Questionnaire (Steptoe *et al.*, 1995). Food-related practice items (e.g. eating out, meal planning, and making shopping lists) were included to describe the food management practices of the sample. Prior to data collection, the survey flow and comprehensibility were checked in a small pretest to ensure clarity and timing; no substantive changes were made to the validated scale items.

**3.2.1 Socio-demographic characteristics.** The questionnaire included questions aimed at identifying participants' sociodemographic characteristics (gender, age, educational level, marital status, employment status, income level) and whether they had received nutrition education and reported eating out habit. Because the "income equals expenses" and "income exceeds expenses" categories both indicate the absence of a perceived income deficit, they were combined into a single group ("income equals or exceeds expenses") to improve interpretability and ensure adequate group sizes for analysis. In addition, the survey included items related to cooking and food preparation processes, such as when cooking skills were acquired, menu planning habits, and the use of shopping lists. Behavioural variables were measured using single-item questions. Eating out habit was assessed by the question "Do you have a habit of eating out?" (Yes/No); meal planning by "Do you plan your meals in advance?" (Yes/No); and making a shopping list by "Do you make a shopping list before grocery shopping?" (Yes/No).

**3.2.2 The cooking skills (CS) and food skills (FS) scale.** The Cooking and Food Skills Confidence Measure, developed by Lavelle *et al.* (2017) was designed to assess individuals' competencies related to cooking and food preparation at home. The scale includes two subscales: Cooking Skills Confidence (14 items) assessing mechanical and physical tasks (e.g. chopping, boiling, frying, and roasting), and Food Skills Confidence (19 items) assessing broader competencies (e.g. meal planning, grocery shopping, budgeting, following recipes, and reading food labels). Each item is rated on a 7-point Likert scale ranging from 1 (very poor) to 7 (very good), with "never/rarely do it" scored as 0. Subscale scores are calculated by summing relevant items, with higher scores indicating greater perceived skill.

The internal consistency reliability (Cronbach's alpha) of the original scale ranged from 0.78 to 0.93 for CS and from 0.85 to 0.94 for food skills. In the Turkish adaptation (Keleş and Akçil Ok, 2021), Cronbach's alpha values were 0.90 for CS and 0.92 for FS. In the present study, alpha coefficients were 0.871 and 0.909, respectively.

**3.2.3 Food choice questionnaire (FCQ).** The Food Choice Questionnaire (FCQ), developed by Steptoe *et al.* (1995), consists of nine dimensions (health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concerns). Here, the nine motivational dimensions that constitute the FCQ are referred to in the

literature as Food Choice Motives (FCM). Participants are asked to rate each item beginning with the phrase “It is important to me that the food I eat on a typical day . . .” on a 4-point Likert scale ranging from 1 (not at all important) to 4 (very important). Subscale scores were computed by averaging the items within each dimension (higher scores indicate stronger endorsement of the motive), consistent with prior FCQ research. In the original scale, the Cronbach’s alpha coefficients for the subscales ranged between 0.70 and 0.87. The Turkish adaptation by [Dikmen et al. \(2016\)](#) reported subscale alpha values between 0.60 and 0.84, with an overall alpha of 0.90. In the present study, the overall Cronbach’s alpha was 0.936.

### 3.3 Ethics approval

Ethical approval for the study was obtained from the Scientific Research and Publication Ethics Committee of Kırklareli University Rectorate (13/02/2024 – 113309).

### 3.4 Data analysis

Descriptive statistics including frequency ( $n$ ), percentage (%), and median (interquartile range; IQR) were used to summarize the data. The reliability of the instruments was assessed using reliability analysis, and internal consistency was evaluated with Cronbach’s alpha coefficient. Cronbach’s alpha values  $\geq 0.70$  were considered acceptable for internal consistency ([Tavakol and Dennick, 2011](#)). The Kolmogorov–Smirnov test was performed to screen the normality of the data distribution. For data that did not follow a normal distribution, the Mann–Whitney U test was used to compare the two independent groups and the Kruskal–Wallis test was used for comparisons involving three or more groups. The relationship between two continuous variables was examined using Spearman’s correlation analysis. Correlation coefficients were interpreted as follows:  $\leq 0.25$  = very weak, 0.26–0.49 = weak, 0.50–0.69 = moderate, 0.70–0.89 = strong, and  $\geq 0.90$  = very strong ([Karagöz, 2021](#)).

The unit of observation was the individual participant. All analyses were conducted at the individual level (unit of analysis: individual), with CS/FS and FCQ/FCM measured and modelled for each participant. Multiple linear regressions were fitted in two steps to predict FCQ total and each FCM subscale. Model 1 (unadjusted) included the two prespecified predictors, CS and FS, both z-standardised prior to modelling to facilitate interpretation; outcomes were kept in their original units. Model 1 results are reported as standardised  $\beta$  coefficients, whereas Model 2 results are reported as unstandardised B (SE), with CS and FS z-standardised and outcomes retained in their original units. Model 2 (adjusted) additionally included socio-demographic covariates that showed  $p < 0.05$  in bivariate screening with CS, FS, or any FCQ outcome (Mann–Whitney U/Kruskal–Wallis for categorical contrasts; Spearman’s  $\rho$  for continuous variables). Categorical covariates were dummy-coded with the following reference levels: Female;  $\leq 25$  years; Single; High school or below; Not employed; Income equals or exceeds expenses; No nutrition education; No eating out; learned cooking as an adult ( $>18$  years); No meal planning; No shopping list.

Model adequacy was summarized by Adjusted  $R^2$  and the F statistic. Regression assumptions were evaluated in SPSS v26 via normal P–P/Q–Q plots of standardised residuals (normality), scatterplots of standardised residuals vs. predicted values, Durbin–Watson (independence of errors), and multicollinearity diagnostics (tolerance and VIF; all VIF  $< 5$ ). Potentially influential observations were screened using Cook’s distance ( $> 1$ ). The level of significance was set at  $p < 0.05$ . All analyses were performed in the Statistical Package for the Social Sciences (SPSS) v26.0.

## 4. Results

This study examined the associations between Cooking Skills (CS) and Food Skills (FS) and food choice motives, operationalised as the Food Choice Questionnaire (FCQ) total score and

the nine Food Choice Motives (FCM) subscale scores. Accordingly, this section presents: (1) group comparisons of CS, FS and FCQ/FCM scores across participant characteristics, (2) Spearman rank correlations among CS, FS and FCQ/FCM scores, and (3) multiple linear regression models estimating unadjusted (Model 1) and covariate-adjusted (Model 2) associations, with CS and FS as predictors and FCQ total and each FCM subscale as outcomes.

The distribution of participants' descriptive characteristics is presented in Table 1. Of the adults, 77.7% ( $n = 590$ ) were female, 53.1% ( $n = 376$ ) were aged  $\leq 25$  years, and 65.5% ( $n = 497$ ) were single. Additionally, 54.7% ( $n = 415$ ) had high school education, and 44.0% ( $n = 334$ ) were employed. Regarding perceived income adequacy, 25.9% ( $n = 197$ ) reported

**Table 1.** Sociodemographic and behavioral characteristics of the participants

<i>Variables</i>	<i>n</i>	<i>%</i>
<i>Gender</i>		
Female	590	77.7
Male	169	22.3
<i>Age</i>		
$\leq 25$ years	376	53.1
26–44 years	306	36.8
$\geq 45$ years	77	10.1
<i>Marital Status</i>		
Single	497	65.5
Married	262	34.5
<i>Educational Status</i>		
Below high school	98	12.9
High school	415	54.7
University or higher	246	32.4
<i>Employment Status</i>		
Yes	334	44.0
No	425	56.0
<i>Income Status</i>		
Expenses exceed income	197	25.9
Income equals expenses	248	32.7
Income exceeds expenses	314	41.4
<i>Received Nutrition Education</i>		
Yes	248	32.7
No	511	67.3
<i>Eating Out Habit</i>		
Yes	573	75.5
No	186	24.5
<i>Age at Learning Cooking Skills</i>		
As a child ( $<12$ years)	107	14.1
As an adolescent (13–18 years)	394	51.9
As an adult ( $>18$ years)	258	34.0
<i>Meal Planning</i>		
Yes	414	54.5
No	345	45.5
<i>Making a Shopping List</i>		
Yes	409	53.9
No	350	46.1

that expenses exceeded income, whereas 74.1% ( $n = 562$ ) reported that income was equal to or exceeded expenses. Overall, 32.7% ( $n = 248$ ) had received nutrition education and 75.5% ( $n = 573$ ) reported eating out. Regarding cooking-skill acquisition, 14.1% ( $n = 107$ ) reported learning CS as a child (<12 years), 51.9% ( $n = 394$ ) as an adolescent (13–18 years), and 34.0% ( $n = 258$ ) as an adult (>18 years). Moreover, 54.5% ( $n = 414$ ) reported engaging in meal planning and 53.9% ( $n = 409$ ) reported making shopping lists (Table 1).

As the scale scores were non-normally distributed, CS, FS, FCQ total, and FCM subscale scores are reported as median (IQR), and group comparisons were conducted using the Mann-Whitney U test or the binary contrasts shown in Table 2.

Comparisons of CS, FS, and FCQ total scores by participants' descriptive characteristics are presented in Table 2. CS scores were higher among women than men (median [IQR]: 74 [62–84] vs 68 [50–81],  $p = 0.001$ ), participants aged >25 years than those aged ≤25 years (75 [63–85] vs 70.5 [57–82],  $p = 0.002$ ), and married than single individuals (78 [66–86] vs 70 [56–82],  $p < 0.001$ ). CS scores were also higher among those with high school education or below (73 [61–84] vs 71.5 [59–84],  $p < 0.001$ ), those who had received nutrition education ( $p < 0.001$ ), those who did not eat out (77 [65–85] vs 72 [58–83],  $p = 0.006$ ), those who learned CS at ≤18 years (75 [63–86] vs 69 [51–81],  $p < 0.001$ ), and those who engaged in meal planning (77 [65–87] vs 68 [54–80],  $p < 0.001$ ) and used shopping lists (76 [63–87] vs 70 [56–81],  $p < 0.001$ ).

FS scores were higher among participants aged >25 years (102 [80–116] vs 91 [76–108],  $p < 0.001$ ), married individuals (105 [87–117] vs 91 [75–109],  $p < 0.001$ ), those with high school education or below (95 [78–111] vs 98 [77–115],  $p = 0.001$ ), employed participants (98 [76–115] vs 94 [78–109],  $p = 0.035$ ), those who had received nutrition education ( $p < 0.001$ ), those who did not eat out (100 [86–113] vs 94 [76–112],  $p = 0.029$ ), those who learned CS at ≤18 years (97 [80–113] vs 93 [74–110],  $p = 0.012$ ), and those who engaged in meal planning (105 [86–117] vs 86 [71–104],  $p < 0.001$ ) and used shopping lists (104 [86–116] vs 86 [70–104],  $p < 0.001$ ).

FCQ total scores were higher among participants aged >25 years (111 [99–123] vs 106 [93–119],  $p < 0.001$ ), married individuals (114 [102–127] vs 106 [93–119],  $p < 0.001$ ), those with university education or higher (109 [98–122] vs 108 [94–122],  $p = 0.002$ ), those who did not eat out (112 [98–126] vs 108 [95–121],  $p = 0.017$ ), and those who engaged in meal planning ( $p = 0.038$ ) and used shopping lists (110 [99–123] vs 106 [92–119],  $p = 0.001$ ). Additional comparisons for the FCM subscales are provided in Table 2 (continued).

Table 3 shows Spearman correlations between CS, FS, and FCQ total and FCM subscale scores. FCQ total was positively correlated with CS ( $r = 0.372$ ,  $p < 0.001$ ) and FS ( $r = 0.424$ ,  $p < 0.001$ ). CS showed weak positive correlations with all FCM subscales ( $r = 0.161$ – $0.333$ , all  $p < 0.001$ ), while FS showed weak-to-moderate positive correlations with the same subscales ( $r = 0.158$ – $0.419$ , all  $p < 0.001$ ).

Table 4 (Model 1) presents unadjusted multiple linear regression analyses (standardized  $\beta$ ). FCQ total was positively associated with both CS ( $\beta = 0.136$ ,  $p = 0.004$ ) and FS ( $\beta = 0.338$ ,  $p < 0.001$ ). CS was positively associated with mood ( $\beta = 0.140$ ,  $p = 0.005$ ), convenience ( $\beta = 0.105$ ,  $p = 0.043$ ), sensory appeal ( $\beta = 0.203$ ,  $p < 0.001$ ), and price ( $\beta = 0.134$ ,  $p = 0.009$ ), but not with health, natural content, weight control, familiarity, or ethical concerns ( $p > 0.05$ ). In contrast, FS was positively associated with health ( $\beta = 0.369$ ,  $p < 0.001$ ), mood ( $\beta = 0.217$ ,  $p < 0.001$ ), sensory appeal ( $\beta = 0.159$ ,  $p = 0.001$ ), natural content ( $\beta = 0.404$ ,  $p < 0.001$ ), price ( $\beta = 0.107$ ,  $p = 0.037$ ), weight control ( $\beta = 0.262$ ,  $p < 0.001$ ), familiarity ( $\beta = 0.254$ ,  $p < 0.001$ ), and ethical concerns ( $\beta = 0.279$ ,  $p < 0.001$ ), but not with convenience ( $p > 0.05$ ).

Table 5 (Model 2) shows adjusted multiple linear regression analyses (B [SE]) controlling for socio-demographic covariates selected using the screening rule. After adjustment, both CS and FS remained positively associated with FCQ total (CS:  $B = 2.10$ ,  $SE = 0.83$ ,  $p = 0.012$ ; FS:  $B = 5.81$ ,  $SE = 0.85$ ,  $p < 0.001$ ; Adj.  $R^2 = 0.206$ ). Across subscales, FS remained significant for health ( $B = 1.30$ ,  $SE = 0.19$ ,  $p < 0.001$ ), mood ( $B = 0.97$ ,  $SE = 0.21$ ,

**Table 2.** Comparison of CS, FS, FCQ total and FCM subscale scores by participant characteristics

Variables	n	CS			FS			FCQ total		
		Median (IQR)	z-value	p-value	Median (IQR)	z-value	p-value	Median (IQR)	z-value	p-value
<i>Gender</i>										
Female	590	74 (62–84)	–3.207	0.001**	97 (80–112)	–1.864	0.062	108 (96–122)	–1.278	0.201
Male	169	68 (50–81)			92 (70–112)			107 (96–120)		
<i>Age</i>										
≤25 years	376	70.5 (57–82)	–3.052	0.002**	91 (76–108)	–4.495	<0.001***	106 (93–119)	–3.604	<0.001***
>25 years	383	75 (63–85)			102 (80–116)			111 (99–123)		
<i>Marital Status</i>										
Single	497	70 (56–82)	–5.032	<0.001***	91 (75–109)	–5.617	<0.001***	106 (93–119)	–5.480	<0.001***
Married	262	78 (66–86)			105 (87–117)			114 (102–127)		
<i>Educational Status</i>										
High school or below	513	73 (61–84)	–4.882	<0.001***	95 (78–111)	–3.182	0.001***	108 (94–122)	–3.145	0.002**
University or higher	246	71.5 (59–84)			98 (77–115)			109 (98–122)		
<i>Employment Status</i>										
Yes	334	73.5 (59–84)	–0.362	0.717	98 (76–115)	–2.103	0.035*	109 (98–123)	–1.946	0.052
No	425	73 (61–84)			94 (78–109)			108 (93–120)		
<i>Income Status</i>										
Expenses exceed income	197	73 (58–83)	–0.531	0.595	94 (77–111)	–0.422	0.673	109 (93–124)	–0.231	0.817
Income equals or exceeds expenses	562	73 (61–84)			96 (78–112)			108 (96–121)		
<i>Received Nutrition Education</i>										
Yes	248	73.5 (59–84)	–3.609	<0.001***	98 (76–115)	–4.270	<0.001***	109 (97–123)	–1.475	0.140
No	511	73 (61–84)			94 (78–109)			108 (93–120)		
<i>Eating Out Habit</i>										
Yes	573	72 (58–83)	–2.769	0.006**	94 (76–112)	–2.179	0.029*	108 (95–121)	–2.389	0.017*
No	186	77 (65–85)			100 (86–113)			112 (98–126)		

(continued)

Table 2. Continued

Variables	n	CS			FS			FCQ total		
		Median (IQR)	z-value	p-value	Median (IQR)	z-value	p-value	Median (IQR)	z-value	p-value
<i>Age at Learning Cooking Skills</i>										
≤18	501	75 (63–86)	–4.808	<0.001***	97 (80–113)	–2.500	0.012*	109 (96–123)	–1.329	0.184
>18	258	69 (51–81)			93 (74–110)			107.5 (95–120)		
<i>Meal Planning</i>										
Yes	414	77 (65–87)	–6.881	<0.001***	105 (86–117)	–8.817	<0.001***	109 (98–123)	–2.071	0.038*
No	345	68 (54–80)			86 (71–104)			108 (93–121)		
<i>Making a Shopping List</i>										
Yes	409	76 (63–87)	–4.847	<0.001***	104 (86–116)	–8.114	<0.001***	110 (99–123)	–3.462	0.001**
No	350	70 (56–81)			86 (70–104)			106 (92–119)		
Variables	n	Health	Mood	Convenience	Sensory	Natural	Price	Weight	Familiarity	Ethical
		Median (IQR)	Median (IQR)	Median (IQR)	appeal	content	Median	control	Median	concerns
<i>Gender</i>										
Female	590	18 (16–21)	18 (15–22)	16 (13–18)	14 (12–15)*	9 (8–11)	9 (8–11)	8 (7–10)	9 (7–10)	8 (6–10)
Male	169	18 (15–20)	18 (15–21)	15 (13–18)	13 (13–15)	9 (7–11)	9 (8–11)	8 (6–10)	9 (7–10)	8 (6–10)
<i>Age</i>										
≤25 years	376	18 (15–21)***	18 (15–21)	15 (13–18)***	14 (12–15)	9 (7–11)***	9 (8–11)	8 (6–10)*	9 (7–10)***	8 (6–10)**
>25 years	383	19 (16.5–21.5)	18 (15–21)	16 (14–18)	14 (12–15)	10 (8–12)	9 (8–11)	9 (7–10)	9 (8–11)	9 (6–10.5)
<i>Marital Status</i>										
Single	497	18 (15–21)***	18 (15–21)	15 (13–18)***	13 (12–15)***	9 (7–11)***	9 (8–11)***	8 (6–9)**	9 (7–10)***	8 (6–10)***
Married	262	20 (17–22)	19 (16–22)	16 (14–19)	14 (12–16)	11 (9–12)	10 (8–11)	9 (7–10)	9 (8–11)	9 (7–11)

(continued)

**Table 2.** Continued

Variables	<i>n</i>	Health Median (IQR)	Mood Median (IQR)	Convenience Median (IQR)	Sensory appeal Median (IQR)	Natural content Median (IQR)	Price Median (IQR)	Weight control Median (IQR)	Familiarity Median (IQR)	Ethical concerns Median (IQR)
<i>Educational Status</i>										
High school or below	513	18 (15–21)*	18 (15–21)	15 (13–18)***	14 (12–15)	9 (7–11)*	9 (8–11)	8 (6–10)	9 (7–11)***	8 (6–10)***
University or higher	246	19 (16–21)	18 (15–21)	16 (14–19)	14 (12–15)	10 (8–11)	9 (8–11)	8 (7–10)	9 (7–10)	8 (6–10)
<i>Employment Status</i>										
Yes	334	18 (15–21)*	18 (16–22)	16 (14–19)*	14 (12–15)	10 (8–11)**	9 (8–11)	8.5 (7–10)	9 (7–10)	8 (6–10)
No	425	18 (16–21)	18 (15–21)	15 (13–18)	14 (12–15)	9 (7–11)	9 (8–11)	8 (6–10)	9 (7–10)	8 (6–10)
<i>Income Status</i>										
Expenses exceed income	197	18 (16–21)	18 (15–22)	16 (14–19)*	14 (12–15)	10 (7–11)	10 (8–12)**	8 (7–10)	9 (7–10)	8 (6–10)*
Income equals or exceeds expenses	562	18 (15–22)	18 (15–21)	15 (13–18)	14 (12–15)	9 (8–11)	9 (8–10)	8 (7–10)	9 (7–10)	8 (6–10)
<i>Received Nutrition Education</i>										
Yes	248	19 (16–22)**	18 (16–22)	16 (14–19)	14 (12–15)	10 (8–11)***	9 (8–11)	8.5 (7–10)	9 (7–10)	8 (6–10)
No	511	18 (15–21)	18 (15–21)	15 (13–18)	14 (12–15)	9 (7–11)	9 (8–11)	8 (6–10)	9 (7–10)	8 (6–10)
<i>Eating Out Habit</i>										
Yes	573	18 (15–21)	18 (15–21)	15 (13–18)	13 (12–15)	9 (7–11)**	9 (8–11)*	8 (6–10)*	9 (7–10)**	8 (6–10)*
No	186	19 (16–22)	18 (16–21)	16 (14–18)	14 (12–16)	10 (8–12)	10 (8–12)	9 (7–10)	9 (8–11)	9 (6–11)
<i>Age at Learning Cooking Skills</i>										
≤18	501	18 (15–22)	18 (16–22)*	15 (13–18)	14 (12–15)	9 (8–11)	9 (8–11)	8 (7–10)	9 (7–11)	8 (6–10)
>18	258	18 (16–21)	18 (15–21)	16 (14–18)	14 (12–15)	9 (8–11)	9 (8–11)	8 (6–9)	9 (7–10)	8 (6–10)
<i>Meal Planning</i>										
Yes	414	19 (16–22)***	18 (15–22)	15 (13–18)	14 (12–16)*	10 (8–12)***	9 (8–11)	8 (7–10)*	9 (7–11)*	9 (6–10)**
No	345	18 (15–21)	18 (15–21)	16 (14–18)	13 (12–15)	9 (7–11)	9 (8–11)	8 (6–10)	9 (7–10)	8 (6–10)
<i>Making a Shopping List</i>										
Yes	409	19 (16–22)***	19 (16–22)**	16 (14–18)	14 (12–15)	10 (8–12)***	9 (8–11)	8 (7–10)*	9 (8–11)**	9 (6–10)
No	350	18 (15–21)	18 (15–21)	15 (13–18)	14 (12–15)	9 (7–11)	9 (8–11)	8 (6–9)	9 (7–10)	8 (6–10)

**Note(s):** \*  $p < 0.05$ . \*\*  $p < 0.01$ . \*\*\*  $p < 0.001$ . Mann–Whitney U test

**Table 3.** The association between participants' CS, FS, FCQ total and FCM

	FCQ total		Health		Mood		Convenience		Sensory appeal	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
CS	0.372	<0.001***	0.333	<0.001***	0.291	<0.001***	0.161	<0.001***	0.275	<0.001***
FS	0.424	<0.001***	0.405	<0.001***	0.316	<0.001***	0.158	<0.001***	0.293	<0.001***
	Natural content		Price		Weight control		Familiarity		Ethical concerns	
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>
CS	0.305	<0.001***	0.181	<0.001***	0.260	<0.001***	0.268	<0.001***	0.299	<0.001***
FS	0.419	<0.001***	0.180	<0.001***	0.301	<0.001***	0.311	<0.001***	0.340	<0.001***

**Note(s):** \*  $p < 0.05$ . \*\*  $p < 0.01$ . \*\*\*  $p < 0.001$ . Spearman Correlation Analysis. *r*: Correlation coefficient

**Table 4.** Multiple linear regression (Model 1): CS and FS with FCQ total and FCM

Predictors	CS $\beta$ (SE)	FS $\beta$ (SE)	Adj. $R^2$	F
FCQ total	0.136 (0.047) **	0.338 (0.047) ***	0.197	94.00
Health	0.069 (0.047)	0.369 (0.047) ***	0.176	81.78
Mood	0.140 (0.049) **	0.217 (0.049) ***	0.108	46.85
Convenience	0.105 (0.052) *	0.087 (0.052)	0.029	12.35
Sensory appeal	0.203 (0.049) ***	0.159 (0.049) **	0.111	48.18
Natural content	0.018 (0.048)	0.404 (0.048) ***	0.171	79.30
Price	0.134 (0.051) **	0.107 (0.051) *	0.047	19.80
Weight control	0.043 (0.050)	0.262 (0.050) ***	0.084	35.93
Familiarity	0.068 (0.050)	0.254 (0.050) ***	0.092	39.29
Ethical concerns	0.080 (0.049)	0.279 (0.049) ***	0.114	49.70

**Note(s):** Model 1 (unadjusted): Each outcome (FCQ total and each food choice motive) was regressed on CS and FS entered simultaneously. Cells show standardised  $\beta$  coefficients. Significance:  $p < 0.05$  (\*),  $p < 0.01$  (\*\*),  $p < 0.001$  (\*\*\*). Adj.  $R^2$ : adjusted R-squared; F: model F-statistic. Multicollinearity: all VIF < 5

**Table 5.** Multiple linear regression (Model 2): FCQ total and FCM predicted by CS and FS

Predictors	CS B (SE)	FS B (SE)	Adj. $R^2$	F
FCQ total	2.10 (0.83) *	5.81 (0.85) ***	0.206	15.01
Health	0.24 (0.19)	1.30 (0.19) ***	0.183	13.13
Mood	0.57 (0.20) **	0.97 (0.21) ***	0.118	8.23
Convenience	0.34 (0.16) *	0.32 (0.17)	0.058	4.33
Sensory appeal	0.41 (0.11) ***	0.41 (0.12) ***	0.120	8.37
Natural content	0.01 (0.11)	0.76 (0.11) ***	0.211	15.48
Price	0.25 (0.11) *	0.22 (0.11) *	0.055	4.18
Weight control	0.08 (0.12)	0.57 (0.12) ***	0.081	5.79
Familiarity	0.06 (0.11)	0.55 (0.11) ***	0.133	9.31
Ethical concerns	0.15 (0.13)	0.70 (0.13) ***	0.115	8.06

**Note(s):** Model 2 (adjusted): Covariates were entered per the screening rule described in Methods. Reference levels: Female;  $\leq 25$  years; Single; Below high school; Not employed; Income equals or exceeds expenses; No nutrition education; No eating-out; learned cooking as an adult ( $>18$  years); No meal planning; No shopping list. Predictors (CS, FS) were z-standardized. Cells show B (SE); SE: standard error; Adj.  $R^2$ : adjusted R-squared; significance:  $p < 0.05$  (\*),  $p < 0.01$  (\*\*),  $p < 0.001$  (\*\*\*). F: model F-statistic. Multicollinearity: all VIF < 5

$p < 0.001$ ), sensory appeal (B = 0.41, SE = 0.12,  $p < 0.001$ ), natural content (B = 0.76, SE = 0.11,  $p < 0.001$ ), price (B = 0.22, SE = 0.11,  $p = 0.044$ ), weight control (B = 0.57, SE = 0.12,  $p < 0.001$ ), familiarity (B = 0.55, SE = 0.11,  $p < 0.001$ ), and ethical concerns (B = 0.70, SE = 0.13,  $p < 0.001$ ), while its association with convenience was not significant ( $p > 0.05$ ). CS showed independent associations with mood (B = 0.57, SE = 0.20,  $p = 0.005$ ), convenience (B = 0.34, SE = 0.16,  $p = 0.039$ ), sensory appeal (B = 0.41, SE = 0.11,  $p < 0.001$ ), and price (B = 0.25, SE = 0.11,  $p = 0.020$ ), but not with health, natural content, weight control, familiarity, or ethical concerns ( $p \geq 0.146$ ). Model fit was modest overall (Adj.  $R^2 = 0.055$ –0.211), with the highest explained variance observed for natural content (Adj.  $R^2 = 0.211$ ).

## 5. Discussion

This study offers a novel approach by examining how Cooking Skills (CS) and Food Skills (FS) are associated with individuals' food choice motives. The findings indicate that both skill

domains are associated factors of food choices. Both CS and FS were positively associated with several food choice motives, including mood, sensory appeal, and price. However, value- and health-oriented motives such as natural content, weight control, familiarity, and ethical concerns showed significant associations only with FS. In contrast, while CS was significantly associated with the convenience motive, no such association was observed for FS. Taken together, this pattern offers construct-level insight: CS may predominantly capture practice-based, procedural competence in meal preparation, whereas FS appears to reflect broader food-management capacity (e.g. planning, procurement, budgeting, and evaluation of food information), which is more directly aligned with health- and value-oriented motives. To our knowledge, evidence on how cooking and food skills relate specifically to food choice motives is still limited, as most international studies have focused on broader outcomes such as diet quality and healthy eating behaviours (da Costa Pelonha *et al.*, 2023; Hartmann *et al.*, 2013; McGowan *et al.*, 2016; Tani *et al.*, 2020; Utter *et al.*, 2016).

Furthermore, the results revealed that individuals' lifestyle, demographic characteristics, and socioeconomic conditions were meaningfully related to their food choice motives. Consistent with previous literature, higher levels of CS and FS were observed among women, married individuals, and older adults (Hartmann *et al.*, 2013; McGowan *et al.*, 2016; Tani *et al.*, 2020). The influence of variables such as age, gender, and marital status on food-related skills can be interpreted within the broader context of gender roles and cultural practices (Hartmann *et al.*, 2013). Consistently, a study conducted in Türkiye examining eating out habits found that men reported eating outside the home more frequently than women (Güney, 2024). This is consistent with the observed gender differences in CS and FS in the present sample.

In addition, the finding that individuals with lower educational levels exhibited higher CS and FS suggests that, in societies with strong traditional structures like Türkiye, the early acquisition of domestic responsibilities may be associated with dietary behaviours. This may reflect not only the development of functional competencies but also the early formation of attitudes toward healthy food choices. However, in the present study, individuals who acquired FS and CS before the age of 18 scored higher in these areas, which may reflect earlier and more sustained exposure to domestic food work and a greater orientation towards health-related motives in adulthood. This result aligns with the findings of Lavelle *et al.* (2016), who reported that food-related skills acquired during childhood are positively associated with food preparation competencies in adulthood.

Although sociodemographic characteristics such as age, gender and education level were associated with differences in CS and FS levels, the direction and significance of the relationship between skills and food choice motives remained constant after adjusting sociodemographic characteristics. This suggests that cooking and food skills are not only a reflection of demographic characteristics, but also independently associated with individuals' food choices. In other words, individuals' cooking and food skills appear to be an independent correlate of their dietary motivations, beyond demographic differences. These findings should also be situated within the socio-cultural context of the study setting. Participants were urban adults in Kırklareli who were at least occasionally involved in home cooking and were surveyed immediately after grocery shopping, a context in which budgeting, procurement routines, and evaluative decisions are salient. In Türkiye, domestic food work is often shaped by gendered role expectations and early-life socialisation into household responsibilities. Within such a context, CS may develop as routinised practical competence through repeated household practice, whereas FS may be more strongly linked to organisational and informational resources (e.g. meal planning, budgeting and label use) that may help individuals act on health- and values-oriented motives in everyday food choices.

Beyond Türkiye, the pattern observed in the present sample is broadly consistent with findings reported in other national settings. Previous studies have similarly shown that stronger cooking- and food-related competencies are associated with healthier dietary patterns, more frequent home meal preparation, and more favourable food-related behaviours

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(Lavelle *et al.*, 2020; McGowan *et al.*, 2017; Tani *et al.*, 2020; Utter *et al.*, 2018). In particular, the stronger association of FS with health-, value-, and control-oriented motives in the present study is in line with international evidence suggesting that broader food-management capacities, such as food preparation, healthy budgeting, and food label use, are positively related to diet quality and healthier food choices (Lavelle *et al.*, 2020; Murakami *et al.*, 2024). Likewise, the prominence of convenience- and price-related motives in relation to CS may reflect the practical demands of everyday meal preparation and is broadly compatible with evidence showing that cooking competence shapes reliance on convenience foods and ultra-processed products (Dittmann *et al.*, 2024; Lam and Adams, 2017). At the same time, the strength and expression of these relationships may vary across countries depending on gender norms, household food roles, time availability, and the wider food environment (Grzymisławska *et al.*, 2020; Mills *et al.*, 2017; Sproesser *et al.*, 2022). This interpretation may be especially relevant in Türkiye, where household food-related labour remains strongly gendered. According to the Türkiye Family Structure Survey, cooking is mainly undertaken by women in 85.4% of households (TÜİK, 2021). Taken together, these findings suggest that some skill–motive pathways may be broadly generalisable, whereas others are likely to be shaped by local social norms and household structures.

Among individuals with stronger FS, motives related to health, natural content, ethical concerns, and weight control which are more cognitively driven and associated with long-term outcomes were found to be more prominent. This suggests that these individuals are not only actively engaged in the preparation process but also may place greater emphasis on food content, nutrition labeling, and healthy eating practices. Indeed, prior research has shown that food and cooking interventions lead to improvements in healthy food choices (Pooler *et al.*, 2022). This finding is consistent with previous studies reporting a direct relationship between FS and health-focused attitudes (da Costa Pelonha *et al.*, 2023; Lavelle *et al.*, 2016; Mengi Çelik *et al.*, 2023; Tani *et al.*, 2020).

Moreover, the significant associations observed between value- and health-oriented motives and FS suggest that these skills are closely linked to individuals' informed dietary decision-making processes. Miller and Cassady (2012) demonstrated that individuals' ability to understand and evaluate nutrition labels is associated with their healthy eating choices. From this perspective, FS appear to be more closely aligned with long-term attitudes toward food choices. Evidence also indicates that individuals who regularly use nutrition labels while shopping tend to exhibit higher dietary quality, and that those with stronger mechanical and conceptual CS are more likely to consume healthier diets (Fernandez *et al.*, 2019). It is known that individuals with higher nutritional knowledge and food literacy show greater interest in food content and utilize cognitive processes such as label reading more effectively (Miller and Cassady, 2012; Trieste *et al.*, 2021). This may help explain the association between FS and motivations such as natural content and ethical concerns, which are influenced by food label use, a component of FS.

Cooking habits are known to be positively associated with diet quality (Wolfson and Bleich, 2015). The findings of Lavelle *et al.* (2020) indicate that FS, rather than CS, are more strongly linked to this relationship. Similarly, in the present study, the lack of a significant association between CS and motives such as natural content, ethical concerns, and weight control suggests that CS may be limited to mechanical and physical competencies (McGowan *et al.*, 2017). Therefore, cognitive-based preferences, such as choosing foods with natural ingredients or tendencies toward weight control, may be more closely related to FS, which include preparatory processes like meal planning, grocery shopping, and evaluating content.

CS and FS are significantly associated with psychologically driven motives such as mood, sensory appeal, and familiarity. This may indicate that these skills are not only physical competencies but are also linked to individuals' emotional well-being, eating attitudes, and behaviours (Lins *et al.*, 2024; Utter *et al.*, 2016). The associations with sensory appeal and mood subscales suggest that individuals engage in food preparation not solely based on rational food choices but also to address emotional needs such as pleasure, comfort, and

familiarity. These findings are consistent with study of [Arslan et al. \(2023\)](#), who reported that CS and FS are positively associated with emotional eating, cognitive restraint, and uncontrolled eating behaviours.

It has been suggested that acquiring these skills at an early age may have more lasting effects on eating behaviours ([Lavelle et al., 2016](#)). The higher scores of women in mood and sensory appeal motives can be interpreted within the context of gender roles and women's psychological relationship with food ([Konttinen et al., 2021](#)). Additionally, [Frez-Muñoz et al. \(2024\)](#) demonstrated that consumer familiarity plays a role in home cooking. As familiarity increases, individual motives such as appetite and eating to feel better may contribute more significantly to cooking behaviour. In the present study, familiarity was more consistently associated with FS (particularly after covariate adjustment) suggesting that familiarity may reflect broader routines in food procurement and planning rather than hands-on cooking competence alone.

CS was found to be significantly associated with economically driven motives, particularly convenience and price. Individuals do not perceive cooking merely as a nutritional activity but also as an efficient strategy for managing time and budget. In line with this, individuals with low CS were more likely to consume ready-made meals ([Hartmann et al., 2013](#)).

On the other hand, the significant association between FS and the price motive suggests that individuals with higher FS may be more competent in shopping planning, cost analysis, and making economically sound decisions ([Begley et al., 2019](#)). However, the lack of a significant relationship between FS and the convenience motive is noteworthy. This finding implies that individuals who are proficient in food preparation are not merely seeking to save time or effort, but rather may report more conscious, planned, and value-based food choices. In this sample, the convenience motive differed by age and employment status, suggesting that time scarcity and competing demands may shape convenience-oriented choices beyond the contribution of CS and FS. This result is consistent with previous findings in the literature ([Chambers et al., 2008](#); [Konttinen et al., 2021](#); [Schliemann et al., 2019](#); [Van Dyke et al., 2024](#)).

These findings suggest that nutrition education programmes may benefit from distinguishing CS, such as hands-on meal preparation and efficient cooking, from food skills, such as planning, budgeting, and understanding food labels. In this sample, better FS were linked to motives related to healthier and more intentional food choices, including health, natural content, ethical concerns, and cost management, even when considering socio-demographic factors. On the other hand, CS were more connected to motives like convenience, sensory appeal, mood, and price. These factors may be especially relevant for attracting younger adults and those who prioritize immediacy, satisfaction, and practicality in their meal choices.

### 5.1 Implications

The present findings help bridge theory and practice by showing that CS and FS relate to different motivational dimensions of food choice, supporting their conceptual distinction as complementary (but not interchangeable) skill domains. In practice, nutrition education programmes may benefit from separating hands-on cooking competence from food-management capacities. In this sample, FS were more consistently linked to longer-term and cognitively driven motives, such as health, natural content, ethical concerns and weight control, suggesting that interventions aiming to promote healthier and more intentional choices should prioritise food skills-oriented content such as meal planning, budgeting and evaluating food information, including label use. Conversely, cooking skills-oriented components may be particularly relevant for addressing more immediate drivers such as convenience and price. At a societal level, stronger food-management competencies may be linked to more informed everyday choices under time and economic constraints. For research, the modest explained variance observed for several outcomes indicates that skills are meaningful but partial contributors. Future studies should incorporate additional determinants

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(e.g. food environment, time scarcity, household composition, and nutrition knowledge) and apply longitudinal or intervention designs to clarify pathways and potential causal effects.

### *5.2 Limitations and future perspectives*

This study has several limitations. First, its cross-sectional design and reliance on self-report measures collected at a single point in time do not allow causal relationships between cooking and food skills and food choice motives to be established. Second, the study was conducted in a single province among adults who at least occasionally cook at home, using non-probability, gender-stratified quota sampling. For this reason, the findings cannot be generalised to the wider adult population and are best interpreted within similar groups of home cooks. Accordingly, the distribution of socioeconomic indicators in this sample should be interpreted as sample-specific rather than population-representative. Although the predominance of women in the sample aligns with national and international evidence on the gendered distribution of household cooking responsibilities, the smaller number of men reduces the precision of estimates for this group. Future studies conducted in different cultural and national contexts are needed to examine whether the observed associations between skills and food choice motives remain stable across settings or vary depending on food environments and sociocultural norms. Third, the use of self-administered questionnaires introduces potential recall and social desirability biases. Moreover, actual food purchasing and dietary intake were not directly observed, which limits ecological validity. Fourth, model fit was modest for several outcomes (Adj.  $R^2 = 0.06\text{--}0.21$ ), suggesting that cooking and food skills explain only a limited proportion of variance in some food choice motives. Variables not included in the current analyses such as the food environment, time scarcity, household composition, nutrition knowledge, and individual psychological factors may account for additional variance. This is consistent with the multifactorial nature of food choice and indicates that other determinants may contribute to the observed associations. Finally, the study focused on individual-level psychological factors influencing food choice and did not examine broader environmental, social or economic determinants.

## **6. Conclusions**

This study found that CS and FS are significantly associated with individuals' food choice motives. The findings indicate that, unlike CS, FS are linked to longer-term and cognitively driven motives such as health, natural content, ethical concerns, and weight control; whereas CS are associated with motives such as mood, sensory appeal, and price. In contrast to FS, CS was also associated with convenience. This distinction suggests that CS and FS may be differentially associated with food choice motives, potentially reflecting different behavioural pathways, with CS reflecting more practice-based, procedural competence in meal preparation and FS capturing broader food-management capacities (e.g. meal planning, budgeting, and evaluating food information such as labels). Beyond skills, food choice motivations appear to be meaningfully associated with individuals' life stage and social context, indicating that demographic and contextual factors should be considered when interpreting skill-motive relationships and when designing interventions. These findings should be interpreted within the cultural and socioeconomic context of the study setting, where everyday food practices and social norms may be related to both skill development and food choice motives. Overall, CS and FS are not merely technical competencies, but important factors associated with dietary behaviours. To promote healthy and sustainable eating behaviours, it may be useful to design skill development programmes that take into account individuals' demographic characteristics, living conditions and cultural contexts. In practice, FS-focused components (e.g. planning and budgeting skills and label use) may be prioritised to support more health and natural content motives, whereas CS focused components may be more effective in addressing immediate drivers such as convenience and price. These insights may inform the design of

skills-based interventions in community nutrition services and educational settings. From a theoretical perspective, the findings support the conceptual distinction between cooking skills and food skills by showing that they relate to different motivational dimensions of food choice.

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