“Takeaway Night”: understanding UK families’ consumption of takeaway food for family mealtimes

Appetite 214 (2025) 108168

Contents lists available at ScienceDirect

Appetite

journal homepage: www.elsevier.com/locate/appet

"Takeaway Night": Understanding UK families' consumption of takeaway food for family mealtimes

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A B S T R A C T

Takeaway food is typically of poor nutritional quality and its increasing availability and consumption is considered a contributor to the obesity crisis. Shared family mealtimes are associated with a wealth of positive outcomes for children and adolescents, and are valued by family members. Parents describe prioritising health when planning family meals and consuming takeaway food seems incongruent with this goal. This study aimed to investigate UK families' consumption of takeaway food for family mealtimes and explore the interplay between the nutritional harms of occasional takeaway food for family mealtimes and the broader benefits arising from sharing meals with family. An online survey was completed by 189 parents diverse in key socio-demographic characteristics. Results showed that consumption of takeaway food for family mealtimes is common (96 % did so at least occasionally) but for most families relatively infrequent (74 % did so less than weekly). Content analysis of responses to open-ended questions revealed that parents considered takeaway food for family mealtimes a convenient, enjoyable treat associated with togetherness and connectedness. Logistic regression analysis indicated a non-linear association between frequent consumption of takeaway food for family mealtimes, household income and neighbourhood deprivation, with low household income and high neighbourhood deprivation significantly associated with frequent consumption. This study is the first to examine the consumption of takeaway food for family mealtimes. The positivity with which parents described "takeaway night" suggests it is an important part of family culture and may not be readily given up. Given this, policies and interventions would most effectively focus on improving the nutritional quality of takeaway food.

1. Introduction

Consumers are presented with a plethora of choices on occasions when they opt for food that is prepared away from home, including *out-of-home* food *(OOH)* which refers to outlets where food and beverages can be purchased and consumed outside the home either on or off the premises (for example restaurants, cafés and bars, takeaways and fast-food outlets) (WHO, 2022), and *online food delivery services (OFDS)* which refer to website or smartphone applications that allow customers to order food for collection or delivery (Statista, 2024). OOH food and OFDS straddle the UK concept of *takeaway food*, which is hot food sold for consumption off the premises (HMRC, 2022) that can be ordered in-person or via a website or app.

There is strong evidence indicating that takeaway food tends to be nutritionally poor (Partridge et al., 2020; WHO, 2022). It contains sugar, saturated fat and salt in amounts that exceed recommended guidance (Lachat et al., 2012) and, when compared to food prepared at home, is associated with poorer nutrition, higher energy intake, higher Body Mass Index (BMI) and higher body fat percent (Albalawi et al., 2022; Wellard-Cole et al., 2022). In line with these findings, higher consumption of fast food has been linked to poorer health outcomes, such as overweight, obesity, and increased risk for Type 2 diabetes and cardiovascular disease (Rosenheck, 2008). Indeed, the increasing availability, accessibility and consumption of takeaway food is considered a contributor to the obesity epidemic (Burgoine et al., 2014; Needham et al., 2020; WHO, 2022). However, while takeaway food might be nutritionally poorer, family mealtimes are associated with a wealth of positive outcomes for children and adolescents beyond nutrition, for example mental health and psychological wellbeing (Snuggs & Harvey, 2023), and it is unclear whether the benefits of shared takeaways for family mealtimes balance the disbenefits of their poorer nutrition.

Recent research reveals that up to one in four children in England have a takeaway at least once per week (Donin et al., 2018) and in households where there are more children, takeaway/fast food is consumed more frequently (Janssen et al., 2018b). Similarly, a recent cross-sectional study in five upper-middle or high-income countries (Australia, Canada, Mexico, UK, USA) indicates that around 15 % of adults typically use OFDS once per week, and use increases amongst respondents living with children (Keeble et al., 2020). However, although this research suggests that children consume food from OFDS, it is unclear if the food ordered is consumed by children on their own (for example when children need to eat at a different time to other

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https://doi.org/10.1016/j.appet.2025.108168
Received 5 February 2025; Received in revised form 30 April 2025; Accepted 30 May 2025
Available online 2 June 2025

family members), or as part of a family meal.

The nutrition profile of takeaway food means it is important to examine its role in family mealtimes. Studies examining children's consumption of food prepared away from home specifically have found that those who consume takeaway meals at least once per week have higher levels of cholesterol, higher fat mass index and higher daily energy intake than those who consume takeaway meals less than once per week (Donin et al., 2018; Goffe et al., 2017; Taher et al., 2019).

On the other hand, research also demonstrates that family mealtimes are associated with benefits for children and adolescents beyond nutrition, and these may balance health concerns if takeaway food is consumed occasionally and eaten with others. A recent systematic umbrella review by Snuggs and Harvey (Snuggs & Harvey, 2023) synthesising the extensive literature investigating outcomes associated with family mealtimes reveals their frequency is consistently positively associated with child and adolescent mental health and psychological wellbeing, and negatively associated with adolescent risk behaviours (illicit drug use, violence and delinquency). Their association with academic achievement is less consistent, but some benefits are indicated (Glanz et al., 2021; Harrison et al., 2015). Moreover, while parents value the togetherness of family mealtimes (Fulkerson et al., 2006), they find planning and preparing them a strain (Jabs et al., 2007; Middleton et al., 2020) and seek to avoid the conflict that can arise between parents and children about the food that is served (Fulkerson et al., 2008). Parents typically prioritise health when planning what to serve for family mealtimes (Snuggs et al., 2019) and while serving takeaway food appears incongruent with that goal, doing so may have the benefit of increasing the frequency of family mealtimes because takeaway food requires less planning and preparation, and there may be a greater likelihood parents and children will agree on the food served.

The role of takeaway food in family mealtimes is not yet clear, in particular whether some of its nutritional harms could be countered by the broader benefits arising from sharing meals as a family. As a first step, in an exploratory study using data from a UK cross-sectional survey, we aim to explore the extent to which families with children/adolescents consume takeaway food for family mealtimes, the circumstances under which this happens, and their reasons for this choice. Specifically, we sought to establish:

1) The frequency and prevalence of consuming takeaway food for family mealtimes, whether this has changed in recent years and, if so, the reasons it has changed.
2) The socio-demographic characteristics associated with how frequently takeaway food is consumed for family mealtimes.
3) The characteristics of family mealtimes where takeaway food is consumed, namely:
   a) *When* takeaway food is consumed for family mealtimes, for example for a particular meal (e.g. dinner), on a particular day of the week (e.g. Friday).
   b) *What* takeaway food is consumed for family mealtimes, for example the source of the food (e.g. Online Delivery Service), the type of food (e.g. pizza).
   c) *How* the specific takeaway food consumed for a family mealtime is chosen (e.g. a parent, turn-taking).
   d) *Which family members* participate in family mealtimes where takeaway food is shared, for example all family members, specific family members.
   e) *Where* the takeaway food is eaten (e.g. at the table, while watching TV).
4) The *reasons* for consuming takeaway food for family mealtimes, for example convenience, as a treat.

In this study, the term *takeaway food for family mealtimes* refers to food prepared away from home that is collected or delivered to be eaten at home for a shared family meal. The term encompasses *takeaway food*, *takeaways*, and *takeout food* which are all terms used to refer to food that is prepared away from home and delivered or collected for consumption within the home (Janssen et al., 2018a; Jaworowska et al., 2013) as well as food purchased using *online delivery services (OFDS)* and *meal delivery apps (MDA)* such as Uber Eats or Just Eat (Keeble et al., 2020; WHO, 2021). It does not refer to meal delivery services that require food to be prepared and/or cooked (e.g. Hello Fresh), snacks/packaged food purchased from shops, or food eaten in restaurant/cafes.

2. Materials and methods

A cross-sectional online survey comprising questions with closed and open-ended responses, hosted on the online survey platform Online Surveys (JISC, 2021), was distributed between July 2023 and August 2023. The survey took approximately 10 min to complete. The study received approval from the University of Reading Research Ethics Committee (2023-106-SS; June 21, 2023).

2.1. Participants

To be eligible for inclusion, participants needed to be a parent of at least one child aged 18 years or under. All participants lived in the UK.

2.2. Recruitment

A recruitment strategy that was both broad (to maximise the reach of participation) and focussed (to target hard-to-reach populations) was adopted to ensure a diverse sample (Schnirer, 2012). Participants were recruited via advertisements on social media (Facebook, Instagram, WhatsApp, and Twitter) and online forums for caregivers and families (Reddit communities, Mumsnet, Netmums, Dadsnet, MadeForMums, BabyCenter, Family Lives, JustParents, TheBump, DAD.info, Dads With Kids). To improve representation of underserved groups (Wieland et al., 2021), additional forums were targeted to increase recruitment of economically disadvantaged groups, single-parents and ethnic minority communities (Money Saving Expert, The Money Shed, Subreddits), and adverts for the study were posted on noticeboards in community settings around Reading, UK (e.g. co-working spaces, churches).

2.3. Procedure

Potential participants were provided with a link or a QR code during recruitment that directed them to information about the study. Once informed consent was given, participants could continue to the survey where clear definitions of terms were provided prior to questions being asked. Given its familiarity compared to OOH food or OFDS, the term "takeaway" was used in the survey. Participants were given the following definition of takeaway food: *"when we talk about takeaway or delivery, we mean all the ways in which you might purchase food cooked outside the home that you eat together at home, for example: using online food delivery services like Deliveroo or Just Eat; ordering delivery services straight from individual food providers (e.g. from a restaurant); going to pick up a takeaway yourself (e.g. from a local restaurant or food van). We are not talking about buying food from supermarkets or grocery stores, or about buying 'meal kits' online that are then delivered for you to cook at home."* Participants were also given a definition for family mealtimes: *"we are interested in how you use takeaway and delivery for family meals. It doesn't have to be all members of the family, but at least one adult and one child/adolescent eating together"*.

2.4. Questionnaires

The survey comprised two questionnaires:

2.4.1. Takeaways for family mealtimes questionnaire (TFMQ)

Because of the lack of a validated and universally accepted tool to measure consumption of takeaway food for family mealtimes, a

questionnaire was developed based on the literature and researchers' expertise (Supplementary Materials Appendix A). Given that little is known about families' consumption of takeaway food for family mealtimes, several open-ended questions were asked. Initial questions were piloted with a small number of eligible parents (n = 5) who described the questionnaire as brief and easy to understand. The final questionnaire comprised ten questions.

Five close-ended questions established characteristics of consuming takeaway food for family mealtimes:

a) The frequency of consuming takeaway food for family mealtimes measured on a six point Likert scale anchored at "several times a week or more" and "never". This type of scale has been used in several studies investigating takeaway use (Miura et al., 2012).
b) Whether the frequency of consuming takeaway food for family mealtimes had increased, decreased or stayed the same in recent years.
c) To determine when takeaway food for family mealtimes was most likely to be consumed, participants were asked to indicate which mealtime (breakfast, lunch, dinner) on which day of the week (Monday-Sunday) they were most likely to consume a takeaway for a family mealtime. Multiple mealtimes/days could be selected.
d) Whether the takeaway food was eaten as part of a family mealtime with response options of "yes", "no" or "other".
e) Which family members participated in mealtimes when takeaway food was consumed with response options of "yourself", "partner", "adult children", "teenagers", "children", "friends", "others".

A further six questions, which were open-ended, enquired about:

f) The kinds of takeaway food consumed for family mealtimes
g) Who chose the takeaway food service consumed
h) Who chose what was ordered from the menu
i) Where the takeaway food was eaten with prompts such as at the table, on lap, in front of the television
j) Reasons for ordering takeaway food
k) Attitudes towards consuming takeaway food for family mealtimes were captured using two sentence completion tasks which can offer insights into the benefits that motivate and costs that discourage (Holaday et al., 2000).
   i. I like it when we get takeaways for our family meal because ….
   ii. The bad thing about getting takeaways for our family meal is …

2.4.2. Socio-demographic questionnaire

In order to contextualise consumption of takeaway food for family mealtimes, and to establish the diversity of the sample recruited, ten questions asked about participants' socio-demographic characteristics: age; sex; self-reported ethnicity using UK Office for National Statistics categories (ONS, 2022a); living with a partner; living with other adults; number and age of children aged 18 years or under living with; education using UK Office for National Statistics categories (ONS, 2023); employment outside the home; annual household income category (Hansen & Kneale, 2013); and the first half of participants' postcodes to establish the Indices of Multiple Deprivation (IMD) quintile which is a measure of relative deprivation for small, fixed geographic areas of the UK (Ministry of Housing, 2019).

2.5. Data analysis

Several quality checks were employed to address inattention, bias, and fraudulent users: 1) online adverts were posted on platforms that employed measures to protect against non-human users; 2) attention check questions were included; 3) some open-ended questions required responses, and these responses were scrutinised to confirm they were realistic; 4) response times were scrutinised for implausibly fast completion time (i.e. minimum completion time less than 5 min); 5) responses were scrutinised for faults and straight-lining (selecting the same response to every question in a series). These processes did not result in the removal of any cases.

Responses to open-ended questions were analysed using conventional and summative approaches to content analysis (CCA and SCA respectively) (Hsieh & Shannon, 2005). CCA adopts an inductive approach to derive codes and categories from textual data and was appropriate for questions about reasons for ordering takeaway food (j) and attitudes towards takeaway food (k). Data were analysed at the word-sense level rather than examined for latent meaning. Once data had been read and re-read it was organised into codes that were combined into themes. SCA enables textual data to be quantified through the systematic application of codes and the subsequent summation of code frequencies; it was used to analyse data relating to the kind and source of takeaway food that participants consumed for family mealtimes (f), as well as who chose the food (g and h) and where the food was eaten (i). Participants gave rich and varied responses producing 1409 text segments that were coded and categorised. None of the codes were mutually exclusive, meaning more than one option could be ascribed to each participant.

Binary logistic regression analysis using the IBM Statistical Package for Social Sciences (SPSS) (Version 27) was conducted to determine which, if any, socio-demographic variables predicted frequency of takeaway food consumed for family mealtimes. The exploratory nature of the study meant a power analysis was not necessary (Haile, 2023) but a rule of thumb of at least 10 events per predictor variable was applied 202-2-3 (Peduzzi et al., 1996; Vittinghoff & McCulloch, 2007) which indicated a sample of at least 150 participants would be required. The dependent variable, frequency of takeaway food consumed for family mealtimes, was dichotomised in line with previous studies such that *frequent* represented weekly or more than weekly and *infrequent* represented occasionally but less than weekly (Adams et al., 2015; Timperio et al., 2009)). To identify independent variables for the binary logistic regression analysis, univariate analysis was conducted (Ranganathan et al., 2017). A significance value of $p < .25$ was considered indicative of an association requiring further investigation (Zhang, 2016). Variables that did not reach this cut-off were dropped from the analysis to avoid increased complexity and attain model parsimony. For categorical independent variables where no more than 20 % of expected counts were less than five and all individual expected counts were ≥ 1, chi-square tests were used. Where this was not the case, for 2x2 contingency tables Fishers Exact Test was used or categories were collapsed:

- Participant's age: *years*
- Participants sex: *male*; *female*
- Participant's self-reported ethnicity (ONS, 2022a): categories collapsed into *White* (comprising White-British/White-Irish/White-Other); and *ethnic minority group* (comprising Asian/Asian British; Black-African/Black-Caribbean/Black-British; Mixed/Multiple Ethnicities; Other Ethnicity)
- Living with a partner: *not living with a partner*; *living with a partner*
- Number of children aged 18 years or under in the household: *one*; *two*; *three or more*
- Age group of youngest child in the family: *pre-school*; *primary school*; *secondary school*
- Participant's educational attainment (ONS, 2023): categories collapsed into GCSE/A-Level (comprising *General Certificate of Secondary Education (GCSE) or equivalents/Advanced Level qualification (A-Level) or equivalents)*; and under-/post-graduate degree (comprising *undergraduate university degree or equivalents*; *post-graduate university degree or equivalents)*
- Household Employment: *no or one adult employed*; *two adults employed*
- Annual Household Income (AHI): *low income (£24, 999 or less)*; *medium income (£25, 000 - £49, 999)*; *high income (£50, 000 or more)* (ONS, 2021)

- Relative neighbourhood deprivation: Index of Multiple Deprivation *quintile* for relevant area of the UK (Ministry of Housing, 2019)

3. Results

Of 246 participants who completed the questionnaire, 57 were excluded because they were not living with at least one child aged 18 years or under resulting in final sample of N = 189.

3.1. Sample characteristics

Participants' socio-demographic characteristics are shown in Table 1. Most participants were female (95 %), White (86 %), living with a partner (90 %) and one or two children aged 18 years or under (83 %), the youngest of whom was at primary or secondary school (60 %). The majority of parents were educated to or beyond undergraduate degree level (or equivalent) (78 %). Most participants were living in a household where two parents were employed (71 %), the majority had a household income of at least £50, 000 (77 %) and one third lived in the most deprived neighbourhoods (IMD Quintile 1 and 2) (37 %).

3.2. Frequency, prevalence and change in consumption of takeaway food for family mealtimes

Of the 189 eligible participants, 140 (74 %) consumed takeaway food for family mealtimes infrequently (less than weekly) while 49 (26 %) did so frequently (≥weekly). In families where takeaway food was consumed for family mealtimes infrequently, 6 (4 %) never did so, a majority did so occasionally (53, 40 %), and about one fifth (26, 19 %) did so monthly (Fig. 1). In families where takeaway food was consumed for family mealtimes frequently, for most this was weekly (41, 84 %) and for a few (8, 16 %) this was several times per week (Fig. 1).

Table 2 shows that typically, the frequency with which participants consumed takeaway food for family mealtimes had remained constant in recent years (44 %), with it decreasing for slightly more participants than increasing (31 % and 25 % respectively). The change in frequency differed between those who infrequently consumed takeaway food for family mealtimes and those who did so frequently primarily explained by a greater decrease among those who consumed takeaway food for family mealtimes frequently compared to those who did so infrequently, but also because those who consumed takeaway food for family mealtimes infrequently had increased their consumption.

As shown in Fig. 2, responses to the open-ended question indicated that, among families' whose consumption of takeaway food for family mealtimes had decreased, the main reason related to the cost of takeaway food or income. Among families whose consumption had increased, the main reason was a change in family members (e.g. children were now considered old enough to consume takeaway food).

3.3. Socio-demographic characteristics associated with the frequency with which takeaway food is consumed for family mealtimes

To enable comparisons with previous research, the dependent variable (frequency of takeaway food consumption for family mealtimes) was dichotomised into *frequent* (weekly or more) and *infrequent* (less than weekly). Univariate regression coefficients were calculated for each of the ten independent variables (reported in Table 1). Three variables: participant education, household income, and neighbourhood deprivation reached the required level of significance ($p < .25$) and were entered into a binary logistic regression analysis using the Enter method. Underlying assumptions were checked in advance and were met: observations were independent; no continuous predictors were entered; collinearity tolerance was ≥0.1 for each predictor demonstrating no perfect multi-collinearity (Harris, 2021). Preliminary diagnostics identified four cases with standardized residuals exceeding ±3.1, indicating poor model fit. These cases were removed to reduce potential bias and

Table 1
Socio-Demographic Characteristics of Participants who Frequently (≥weekly) Consume Takeaway Food for Family Mealtimes Compared to Characteristics of those who do so Infrequently (≤weekly) (N = 189).

Socio-Demographic Characteristic	Infrequent Takeaway Food (*n* = 140)	Frequent Takeaway Food (*n* = 49)	Test Statistics[g,h]
Age[a]:			
Median (IQR)	40 years (35–46)	37 years (33–43)	U = 3237.00, p = .607
Range	18 years–58 years	26–57 years	
	***n* (%)**	***n* (%)**	
Sex			p = .1.00, FET
Female	132 (94.3)	47 (95.9)	
Male	6 (4.3)	2 (4.1)	
Missing	2 (1.4)	0 (0.0)	
Ethnicity[b]			χ^2[b](1, N = 189) = 0.23, p = .635
Asian, Asian British	6 (4.3)	2 (4.1)	
Black-African, Black-Caribbean or Black-British	2 (1.4)	4 (8.2)	
White British, White-Irish or White-Other	121 (86.4)	41 (83.7)	
Mixed or Multiple Ethnicities	10 (7.1)	0 (0.0)	
Other Ethnicity	1 (0.7)	2 (4.1)	
Living with a Partner	127 (90.7)	43 (87.8)	p = .584, FET
Number of children (≤18 years) in the family			χ^2[b](2, N = 189) = 2.32, p = .314
1	52 (37.1)	20 (40.8)	
2	67 (47.9)	18 (36.7)	
3	15 (10.7)	7 (14.3)	
4	5 (3.6)	3 (6.1)	
5	1 (0.7)	1 (2.0)	
Age group of youngest child			χ^2[b](2, N = 185) = 0.039, p = .981
Pre-school (aged under 4 years)	55 (40.4)	20 (40.8)	
Primary school (aged 4–11 years)	43 (30.7)	16 (32.7)	
Secondary school (aged 12–18 years)	38 (27.1)	13 (6.5)	
Missing	4 (2.9)	0 (0.0)	
Participants' Educational Attainment[c]			χ^2[b](1, N = 189) = 4.16, p < .041
GCSE or equivalents	9 (6.4)	7 (14.3)	
A-Level or equivalents	17 (12.1)	9 (18.4)	
Undergraduate degree or equivalent	65 (46.4)	20 (40.8)	
Post-graduate degree or equivalent	49 (35.0)	13 (26.5)	
Household Employment[d]			χ^2[b](1, N = 189) = 0.41, p = .525
No parents employed	2 (1.4)	4 (8.2)	
One parent employed	37 (26.4)	12 (24.5)	
Two parents employed	101 (72.1)	12 (32.4)	
Annual Household Income (AHI)[e]			χ^2[b](2, N = 170) = 8.39, p = .015
£9, 999 or less	1 (0.7)	1 (2.0)	
£10, 000 to £24, 999	3 (2.1)	5 (10.2)	
£25, 000 to £49, 999	26 (18.6)	4 (8.2)	
£50, 000 to £74, 999	33 (23.6)	16 (32.7)	

(*continued on next page*)

Table 1 (*continued*)

Socio-Demographic Characteristic	Infrequent Takeaway Food (*n* = 140)	Frequent Takeaway Food (*n* = 49)	Test Statistics[g,h]
£75, 000 to £99, 999	22 (15.7)	11 (22.4)	
£100, 000 or more	39 (27.9)	9 (18.4)	
Prefer not to answer	16 (9.9)	3 (6.1)	
Indices of Material Deprivation Quintile[f]			χ^2[b](4, N = 186) = 6.33, p = .176
1 (most deprived)	21 (15.0)	11 (22.4)	
2	27 (19.3)	9 (18.4)	
3	30 (21.4)	5 (10.2)	
4	25 (17.9)	6 (12.2)	
5 (least deprived)	34 (24.3)	18 (36.7)	
Prefer not to answer	3 (2.1)	0 (0.0)	

[a] Data missing for 1 participant (0.5 %).
[b] ONS, 2022a.
[c] UK Educational Qualifications: General Certificate of Secondary Education (GCSE); Advanced Level qualifications (A-Level) (ONS, 2023).
[d] Includes single- and dual-parent households and full- or part-time employment outside the home.
[e] Hansen & Kneale (201; 3).
[f] Ministry of Housing (2019)
[g] Mann-Whitney *U* Test (U); Chi-squared test (χ^2); Fisher's Exact test (FET).
[h] Categories for analysis: White *or* ethnic minority group; 1 *or* 2 *or* ≥ 3 children; GCSE/A-Level *or* under-/post-graduate degree; ≤1 *or* 2 parents employed; low (<£24, 999) *or* middle (£25, 000- £49, 999) *or* high (£50, 000 or more) income.

improve the stability of the regression model (Field, 2024).

A test of the full model against a constant only model was statistically significant, indicating that the predictors as a set reliably distinguished between infrequent and frequent consumption of takeaway food for family mealtimes ($\chi 2$ (7) = 19.574, p = .007). The model explained 16. % of the variance in frequency of serving takeaway food for family mealtimes (Nagelkerke $R^2 = 0.160$), and correctly classified 74 % of the cases. Hosmer-Lemeshow test of goodness of fit was non-significant ($\chi 2$ (7) = 6.81, p = .802) indicating that the model fitted the data well.

Table 3 shows that participants from middle-income households were significantly less likely to have takeaway food for family mealtimes frequently compared to participants from low-income households (Exp (B) = 0.14, 95 % CI = 0.02–0.76). There were no significant differences in the frequency of takeaway food for family mealtimes between high-income households and low-income households. In addition, participants from IMD3 were significantly less likely to have takeaway food for family mealtimes frequently compared to participants from IMD1 (Exp(B) = 0.21, 95 % CI 0.05–0.88). Compared to IMD1, there were no significant differences in the frequency of takeaway food for family mealtimes between participants from IMD2, 4 or 5 and IMD1. Finally, there was no significant effect of participants' education (Exp (B) = −0.80, 95 % CI 0.19–1.06).

3.4. Characteristics of family mealtimes when takeaway food is consumed

The family mealtime for which participants chose to consume takeaway food varied relatively little (Table 4). Participants rarely chose family breakfast or lunch on weekdays as an occasion to consume takeaway food (3.5 %). A bigger proportion identified family breakfast and/or lunch on weekends as an occasion on which they would consume takeaway food (11.4 %). Family dinner was the most typical occasion for participants to consume takeaway food; less frequently midweek family dinners (18.6 %), most commonly Friday or Saturday dinner (75.4 %).

Responses to open-ended questions, summarised in Table 5, indicated that the most common source of takeaway food for family mealtimes was online food delivery apps; pizza was the most common type of food ordered. Typically, everyone in the family was involved in choosing the takeaway food to be consumed; children vary rarely chose alone. Takeaway food for family mealtimes was typically eaten together at the table.

Table 2
Change in the Frequency Takeaway Food is Consumed for Family Mealtimes (N = 189).

Change in Frequency	Infrequent Takeaway Food (n = 140)	Frequent Takeaway Food (n = 40)	Total (N = 180)[a]
	n (%)	*n* (%)	*N* (%)
Frequency Decreased	4 (8.2)	54 (38.6)	58 (30.7)
Frequency Remained the Same	26 (53.1)	58 (41.4)	84 (44.4)
Frequency Increased	19 (38.8)	28 (20.0)	47 (24.9)

[a] Data missing for 9 participants.

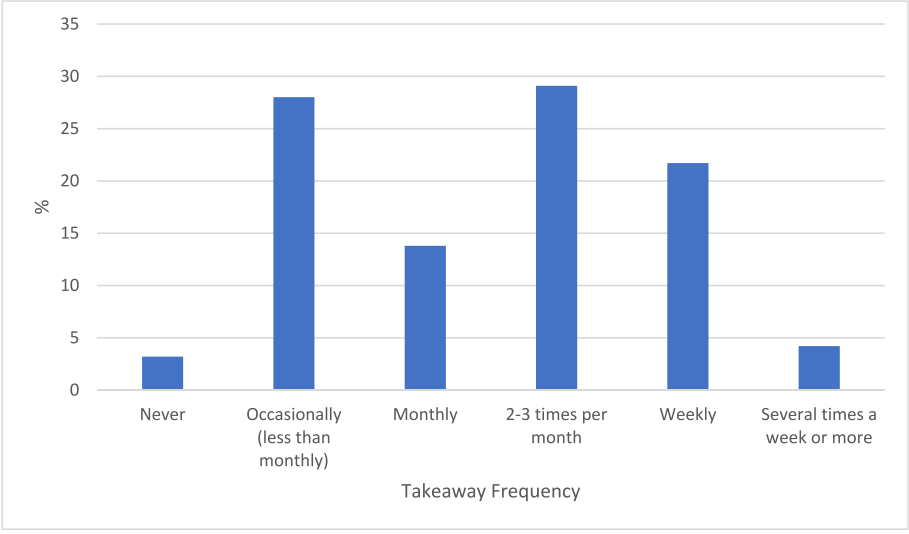

Fig. 1. Frequency takeaway food consumed for family mealtimes (N = 189).

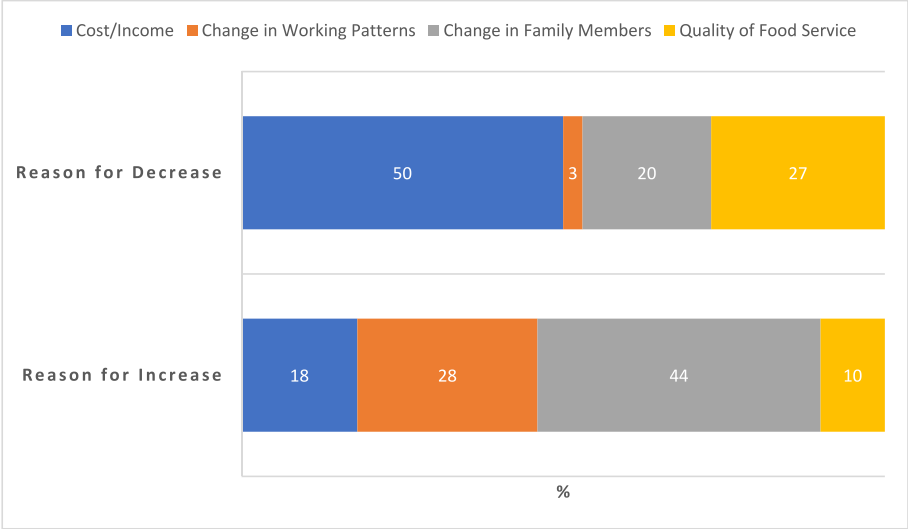

Fig. 2. Reasons for a Change in the Frequency Takeaway Food is Consumed for Family Mealtimes (N = 189).

Table 3
Predictors of frequent takeaway food consumption for family mealtimes (N = 189).

Variable	B	S.E.	Wald	df	Sig.	Exp (B)	95 % CI for Exp (B)	
							Lower	Upper
Participants' Education[a]								
GCSE/A-Level								
UG/PG Degree	−0.80	0.44	3.37	1	.066	0.45	0.19	1.06
Household Income[b]								
Low			5.52	2	.063			
Middle	−1.20	0.88	5.20	1	.023	0.14	0.02	0.76
High	−0.94	0.72	1.68	1	.195	0.39	0.10	1.61
Neighbourhood Deprivation (IMD)[c]								
1			6.55	4	.162			
2	−0.20	0.57	0.12	1	.732	0.82	0.27	2.51
3	−1.58	0.74	4.54	1	.033	0.21	0.05	0.88
4	−0.69	0.62	1.27	1	.260	0.50	0.15	1.67
5	−0.20	0.51	0.01	1	.970	1.02	0.37	2.78

[a] Or equivalents; General Certificate of Secondary Education (GCSE); Advanced Level qualifications (A -Level); Undergraduate Degree (UG); Post-graduate Degree (PG) (ONS, 2023).
[b] Low (≤£24, 999); Middle (£25, 000 - £49, 999); High (≥£50, 000) (ONS, 2021).
[c] Index of Multiple Deprivation (Ministry of Housing, 2019).

Table 4
Typical Occasions When Takeaway Food is Consumed for a Family Mealtime (n = 370)[a].

Occasion	Breakfast[b]		Lunch[b]		Dinner[b]		Total	
	n	%	*n*	%	*n*	%	*n*	%
Monday – Thursday	2	1.1	11	5.8	69	36.5	82	43.3
Friday	0	0.0	8	4.2	145	76.7	153	80.1
Saturday	11	5.8	11	5.8	134	70.1	156	82.5
Sunday	11	5.8	9	4.8	37	19.6	57	30.2
Total	24	13	39	21	385	204		

[a] Number of responses (participants could select more than one occasion).
[b] Number of occurrences (n) as a proportion of the 189 participants (%).

Table 5
Characteristics of takeaway food consumed for family mealtimes (N = 1409 comments).

Characteristic	Comments	
	n	%
Source of Takeaway Food Consumed		
In-person collection	409	29
Online food delivery app	620	44
Direct from delivery outlet	52	27
Type of Takeaway Food Consumed		
Pizza	395	28
Fish & Chips	296	21
East Asian Cuisine	197	14
South Asian Cuisine	268	19
Other		18
Selection of Takeaway Food[a]		
Everyone chooses	1029	73
Adults choose with input from children	42	3
Only adults choose	310	22
Only children choose	28	2
Location Takeaway Food Consumed		
At the table	761	54
Living room/lounge/sofa	197	14
In front of TV	451	32

[a] Children ≤18 years.

3.5. Reasons for consuming takeaway food for family mealtimes

The most commonly cited reason for consuming takeaway food for family mealtimes, elicited via the sentence completion task (see 2.3.1 k. i), related to *convenience* (n = 65) with participants describing consuming takeaway food for family mealtimes as an easy, last minute solution to addressing the practical and individual barriers to cooking (n = 41). Many participants described consuming takeaway food for a family mealtime as a "break from the grind" of meal planning, preparation and clearing up (n = 105) and opting for takeaway food when they did not want to cook or "could not be bothered". Participants also described choosing takeaway food for more proactive reasons; because they felt like it or fancied a particular takeaway food (n = 21), or because doing so provided the opportunity to eat something that they would not cook at home (n = 14). In addition to *convenience*, participants described consuming takeaway food for family mealtimes because it was *enjoyable* and meant spending time eating together and without the effort involved in preparing and clearing up after a meal (n = 82). Participants also perceived consuming takeaway food for family

mealtimes as a *treat* (n = 130) and often described doing so for special occasions or celebrations such as birthdays or when eating with guests (n = 30) or as part of family traditions (n = 20).

Responses elicited from the second sentence completion task (see 2.3.1 k.ii), revealed several negative aspects of consuming takeaway food for family mealtimes, with participants describing takeaway food as *expensive* (n = 122) and *unhealthy* compared to home-cooked food (n = 111). Some reported feeling *guilty* about serving it (n = 10). Participants also described being dissatisfied with takeaway food and delivery services for reasons such as availability (due to locality), individual dietary requirements, taste preferences or unsatisfactory quality (n = 27). A few participants expressed *environmental concerns* relating to the use of single-use plastics (n = 5). Only two participants reported there was nothing they did not like about consuming takeaway food for family mealtimes.

Characteristics of the eight participants who reported having takeaway food for family mealtimes several times each week were examined to determine if they differed from other participants. Their socio-demographic characteristics reflected those of the full sample: all were female and White, and there was variety in terms of number and age of children, education, employment, household income and neighbourhood deprivation. Notably, all but one gave convenience as the reason for consuming takeaway food for family mealtimes and all acknowledged its unhealthiness.

4. Discussion

The aim of this study was to better understand families' consumption of takeaway food for family mealtimes, specifically how often it is consumed, by whom, in what circumstances, and for what reasons.

The results of the current study found that consuming takeaway food for family mealtimes was common but not typically frequent, with most families doing so monthly or less. Similar to other UK studies (Donin et al., 2018; Janssen et al., 2018a) only around one quarter of families consumed takeaway food for family mealtimes frequently; for most this was weekly but for a small number this was several times per week, and few families never consumed takeaway for family mea Those who consumed takeaway food for family mealtimes several times a week were motivated by its convenience. The type of takeaway food consumed varied, typically with all family members contributing to the choice, and it was most common for takeaway food to be consumed for dinner on Friday or Saturday evening, ordered using an OFDS app, and eaten together at the table. While parents were aware that takeaway food is typically unhealthy, and some expressed concern about consuming it for family mealtimes, it was commonly described as convenient and an enjoyable treat associated with spending time together as a family. This aligns with findings from previous studies showing that family mealtimes are perceived positively, as an opportunity for togetherness and connectedness (Fulkerson et al., 2006; Persson Osowski & Mattsson Sydner, 2019).

To determine the socio-demographic factors that might influence consumption of takeaway food for family mealtimes, the role of several characteristics was assessed. The current study found that household income and neighbourhood deprivation independently predict the frequency of takeaway food consumption for family mealtimes. Parents from the lowest income households and those living in the most deprived neighbourhoods were more likely to have takeaway food for family mealtimes frequently compared to those from middle-income households and those in the middle quintile for neighbourhood deprivation. Findings from previous research investigating the role of similar characteristics is mixed. While evidence consistently demonstrates takeaway food outlets are more dense in neighbourhoods of higher deprivation (Janssen et al., 2018a; Maguire et al., 2015), it is unclear if this translates into increased consumption among lower socio-economic status (SES) groups. Some older studies have not found SES to be related to takeaway food consumption in a consistent way (Adams et al., 2015; Giskes et al., 2011) but more recent studies have demonstrated lower SES is associated with greater consumption (Gesteiro et al., 2022; Janssen et al., 2018a; Wills et al., 2019). These contrary findings may be due to variation in the way studies defined and operationalised takeaway food and SES, or they may be explained by social and/or cultural differences between Australia, Europe, the UK and the USA, where the research was conducted. Alternatively, they may be indicative of significant changes in the consumption of takeaway food in recent years (Janssen et al., 2018a).

While in the current study parents from middle-income households and those in the middle quintile of neighbourhood deprivation were less likely to frequently consume takeaway food for family mealtimes compared to those in low-income households and the most deprived neighbourhoods, parents from high income households and those living in the least deprived neighbourhoods did not have takeaway food for family mealtimes any less frequently. These findings cast doubt on a straightforward linearity in the relationship between household income, neighbourhood deprivation, and takeaway food consumption for family mealtimes and, instead, indicate a complex interplay between factors specific to different populations. For example, in high-income households the cost of takeaway food may be less prohibitive, making its convenience more appealing (Robson et al., 2016). By contrast, while takeaway food for a family mealtimes may be considered expensive by those in the lowest income households, it may be more affordable than other treats (Hevesi et al., 2024). Alternatively, limits to space and resources may make preparing meals at home difficult for low-income households in ways that are not the case for higher-income households (Select Committee on Food, Poverty, Health and the Environment, 2020).

Findings from previous studies investigating the role of other socio-demographic characteristics in takeaway food consumption is mixed (Adams et al., 2015; Mills et al., 2018). In this study, no other socio-demographic characteristics significantly predicted consumption of takeaway food for family mealtimes.

The current study found that, typically, the frequency with which families consumed takeaway food for family mealtimes had remained constant over recent years. Where there was change, it was mostly explained by frequent consumers decreasing their consumption, although it is plausible that there was a floor-effect, with infrequent consumers unable to endorse a decrease of less than monthly. While the main reason for an increase in consumption was the perception that children had grown old enough to consume takeaway food, the main reason for a decrease related to cost and income. The recent UK cost-of-living crisis has significantly reduced many households' discretionary spending (ONS, 2024) and industry reports that transferring the increased costs of takeaway food on to consumers is pushing many to swap to meals prepared at home (IBISWorld, 2024).

In this study, for most families consuming takeaway food for family mealtimes was the exception rather than the norm. Many parents, in particular those who consumed takeaway food for family mealtimes several times each week, mentioned its convenience, but the majority of responses referred to it being special in some way: a break from daily routines; an opportunity to enjoy time with the family; a treat. Blow et al.'s (2019) recent Grounded Theory study illuminates the complex social and personal factors that influence food choice. Most relevant to this study, parents described sharing a takeaway meal as a hedonistic act that provides an opportunity for bonding and a welcome break from cooking and cleaning. Consuming takeaway food was ingrained in their eating routines and traditions, in particular weekend takeaway consumption, and there was no desire to eliminate takeaway foods from their diet.

Parents are typically motivated to provide family mealtimes believing they are a positive experience, promote family relationships and help children feel secure (Middleton et al., 2020; Schuster et al., 2019). However, they also describe family mealtimes as a strain and the food served a source of conflict (Jabs et al., 2007; Middleton et al., 2020;

Robson et al., 2016; Snuggs & Harvey, 2023). Given the convenience of takeaway food and the perception of it as a treat it is unsurprising that, in the current study, parents' motivation to ensure family mealtimes are conflict free and enjoyable sometimes overrode their nutrition-oriented goals.

This study was rigorously designed and conducted and has two particular methodological strengths. Firstly, extensive efforts were made to recruit a sample that was diverse on key socio-demographic characteristics. This can be seen, for example, in the approximately even distribution of participants across the five IMD quintiles. While not wholly successful (14 % of our sample was from an ethnic minority group compared to 18 % of the population of England and Wales (2022b), sufficient diversity made it possible to establish the role of all socio-demographic characteristics in the consumption of takeaway food for family mealtimes. This is essential if policies aimed at eliminating systematic health disparities are to be successful (Matsuda et al., 2016). Secondly, an advantage of mixed methods research is that it facilitates a deeper understanding of things that are counted (Dawadi et al., 2021). In this study, the combination of quantitative survey data with the systematic analysis of responses to open-ended questions allowed the examination of both the behaviour of consuming takeaway food for family mealtimes and attitudes towards doing so (Xue et al., 2021).

Despite its strengths, there are several limitations to this study. Although the ratio of events to variable (EPV) exceeded 10 in the logistic regression analysis, some authors have recommended a substantially greater EPV of 50 (Bujang et al., 2018). A bigger sample would have avoided the need to collapse levels of some variables, specifically ethnicity, education and household income, and would have enabled a fuller understanding of their role. The majority of parents who responded to our survey were White, educated mothers who lived with a partner and school-aged children in households where two parents were employed and the household income was above the UK national average. While our efforts to recruit a sample that was representative of the UK population in terms of income and ethnicity were somewhat successful, parents who responded to our survey were highly educated; 78 % had at least an undergraduate university degree level compared to 34 % of the population (ONS, 2023). Given that consuming takeaway food more frequently is associated with lower educational attainment (Mills et al., 2018), it is possible that our study underestimates the frequency with which takeaways are consumed for family mealtimes. Another limitation is the over-representation of mothers. While traditional gender roles may have become less clear-cut, mothers remain the nutritional gatekeepers for the family unit (Hartmann et al., 2014) and primarily responsible for meal preparation and provision (Rahill et al., 2020). It is therefore unsurprising that the substantial majority of those who participated were mothers. However, the small number of fathers who participated means it is not possible to determine whether their reasons for consuming takeaway food for family mealtimes differ from mothers', or the extent to which they play a part in the decision to do so. In addition, the healthiness of the takeaway food consumed was not assessed in this study. While assumptions can be made about the healthiness of pizza, fish and chips, south and east Asian food, the source of nearly a fifth of the takeaway food consumed was unspecified. It is plausible that this included takeaway food that would be considered healthy, for example poke and buddha bowls which are increasing in popularity (IBISWorld, 2024).

4.1. Implications for research and policy

Takeaway food consumption is continuing to rise in the UK, and is now 50 % above pre-pandemic levels (Augsburg et al., 2024). The current study revealed that one in five households have takeaway food for family mealtimes frequently, and almost all do at least occasionally. Although our findings suggest that takeaway food plays a valued role in family mealtime routines, we did not investigate families' broader or usual eating practices. Future research could build on the findings of this study by examining how takeaway food consumption fits within overall family eating habits and dietary patterns, including the role of home-prepared family meals. Parents choose takeaway food for family mealtimes despite concerns around its healthiness. Conflict in relation to parents' goals when choosing what to serve for family mealtimes has been highlighted as a potential issue in previous studies (Snuggs et al., 2019) and further research is needed to understand why and how the convenience and enjoyment of a "takeaway night" overrides nutrition-oriented goals, and whether the benefits of shared mealtimes outweigh the disbenefit of takeaway food. Given the non-linear relationship found in the current study between household income, neighbourhood deprivation and frequency of takeaway food consumption, future research should consider the motivations of different SES groups.

Parents are likely to continue choosing takeaway food for family mealtimes at least occasionally despite being aware of its unhealthiness (Blow et al., 2019), and so policies that aim to control the availability of takeaway food may not have the desired impact (Butland et al., 2007). Although the relationship is complex, the consumption of takeaway food does appear to be sensitive to household income for some families, and there is good evidence that increasing taxation can be highly effective in changing behaviour (Paraje et al., 2023). Alternatively, interventions could usefully be focused on improving the nutritional quality of takeaway food and there is a role for national government, local government and industry in achieving this (British Heart Foundation, 2013; Marteau et al., 2015). For example, portion sizes have increased substantially for many takeaway foods since UK Food Standards Agency published recommendations in 1993 (British Heart Foundation, 2013). Parents have been shown to engage in compensatory behaviours that aim to limit the "damage" of takeaway food by making choices such as smaller portion sizes (Blow et al., 2019), so finding acceptable ways to reduce the portion sizes consumed by individuals may be one approach (Marteau et al., 2015). Moreover, there is some indication that voluntary initiatives designed to encourage takeaway caterers to provide healthier food by swapping to healthier ingredients, serving smaller portions, or nudging consumers in the direction of healthier choices can be successful (Bagwell, 2014; Public Health England, 2017).

An alternative intervention may be to address the normalisation of unhealthy takeaway food. Social norms have a powerful influence on eating behaviour (Cruwys et al., 2015) and food is more noticeable, arousing and memorable when promoted through depictions of shared meals in social groups (Samson & Buijzen, 2021). In this study, parents often described consuming takeaway food for family mealtimes in terms of enjoyment and as an opportunity for the family to spend time together. Policies may therefore be most effective if they focus on improving the nutritional quality of takeaway foods and promoting the normalisation of healthier choices through advertising standards, portion size regulations, reformulation, and collaborations with the food industry such as the Healthier Catering Commitment in London (London Environmental Health Managers, 2025).

5. Conclusions

This study is the first to examine consumption of takeaway food specifically for family mealtimes. It reveals that, in the UK, consuming takeaway food for family mealtimes is common but, for most families, relatively infrequent. It is most often consumed for family mealtimes on a Friday or Saturday evening, and it represents a convenient, enjoyable treat that is associated with togetherness and connectedness. Parents choose takeaway food for family mealtimes despite concerns around its healthiness, perhaps because the convenience and enjoyment of a "takeaway night" overrides their nutrition-oriented goals.

In the current study, most of the socio-demographic characteristics assessed did not predict how frequently takeaway food is consumed for family mealtimes, however parents from the lowest income households and those living in the most deprived neighbourhoods were more likely to have takeaway food for family mealtimes frequently compared to

those from middle-income households and those in the middle quintile for neighbourhood deprivation. This was not the case when compared to participants from high income households and those living in the least deprived neighbourhoods suggesting a complex interplay between factors specific to different populations.

This study suggests that parents are likely to continue choosing takeaway food for family mealtimes, at least occasionally, and it would be desirable to preserve the positive social benefits for families of "takeaway night". Public health efforts could therefore focus on facilitating improvements to the nutritional quality of takeaway options and shaping advertising to promote healthier choices.

CRediT authorship contribution statement

Sarah Snuggs: Writing – review & editing, Writing – original draft, Supervision, Project administration, Methodology, Investigation, Formal analysis. **Sarah Sunderrajan:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation. **Kate Harvey:** Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Research data

Data supporting the results reported in this paper are openly available from the University of Reading Research Data Archive at https://doi.org/10.17864/1947.001348.

Ethical statement

The study received approval from the University of Reading Research Ethics Committee (2023-106-SS; June 21, 2023).

Funding sources

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

thank you to the parents who participated in this study.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.appet.2025.108168.

Data availability

The authors do not have permission to share data.

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