Understanding Studies on Consumers’ Food Choices Using Food Choice Questionnaire: A Scoping Review and Bibliometric Analysis (ScoRBA)

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ABSTRACT

Since the development of the food choice questionnaire (FCQ) to assess consumers’ food choice motives in 1995, studies using the FCQ have been highly diverse. Despite the abundance of research on the topic, FCQ nevertheless manages to provide deep insights into consumers’ food choices—a crucial aspect for the agrifood industry and the formulation of food policies. This study aimed to analyze science mapping and synthesize research implications on the studies of consumers’ food choice motives using FCQ. In total, 169 FCQ-related journal articles were retrieved from the Scopus and Web of Science (WoS) databases for this study. The data were analyzed using a scoping review and bibliometric analysis (ScoRBA). The findings disclosed a positive trend in research on consumers’ food choice motives using FCQ. Notably, two seminal papers significantly influenced this field. Furthermore, specific research topics emerged and diversified over time, with recent themes encompassing consumer issues, consumer segments, research methods, and contextual factors. Recommendations for future research included: (1) conducting longitudinal studies to bridge the gap between food choice motives and dietary behaviors, with the incorporation of additional new recent factors; (2) longitudinal studies to explore nutrition, psychology, and health study groups in diverse cultural settings and more reliable research; (3) exploring FCQ research through a gender lens within varied cultural contexts, with an expansion of longitudinal research and more parameters; and (4) delving into FCQ research on adolescents, considering various potential influencing factors and utilizing data capable of elucidating causal relationships between variables.

Keywords: Bibliometric analysis; Food choice; Food choice questionnaire; Motive; Scoping review

INTRODUCTION

Global food systems have experienced significant transformations. Accordingly, these rapid transformations, driven by the rise in income, urbanization, and globalization, have led to changes in consumers’ diets (Reardon et al., 2019; Reardon & Timmer, 2014). People worldwide have shifted toward better food consumption patterns, expanding food diversity.
(Caballero & Popkin, 2022). Indonesian consumers’ growing demand for high-value agricultural products, such as fruit, vegetables, meat, fish, eggs, and dairy, illustrates the case (Reardon, Stringer, Timmer, Minot, & Daryanto, 2015; Toiba, Umberger, & Minot, 2015). A report by Food and Agriculture Organization [FAO] (2017) unveiled a transition in dietary patterns toward increased consumption of meat, fruits, and vegetables compared to grains due to income growth in low- and middle-income countries. The rising consumption and diversification of diets indicate that each person has individual motives for choosing food.

According to Onwezen, Reinders, Verain, and Snoek (2019), food choice motives refer to the reasons or motivations behind someone’s food choices or consumption. Different factors, such as health, cost, convenience, and taste, could influence consumers’ choices for food (Lyerly & Reeve, 2015; Steptoe, Pollard, & Wardle, 1995). Meanwhile, others consider cultural factors, such as norms and values, to shape their views on the ideal types of food (Cunha, Cabral, Moura, & de Almeida, 2018). Consumers motivated by health-related factors in their food demand favor organic, minimum pesticide-free, and low-sugar food (Lidew et al., 2015).

Understanding consumers’ motives for food choices provides basic information for policymakers and businesses to develop policy interventions, strategies, programs, innovations, and campaigns concerning food consumption (P.-J. Chen & Antonelli, 2020). It is also a key to the success of agrifood value chain development since the demand for quality food drives changes in the food supply chain (King & Venturini, 2005; Taylor & Fearne, 2006). In empirical studies, one of the evolving and widely employed tools to predict consumers’ food choices is the food choice questionnaire (FCQ) (Pollard, Steptoe, & Wardle, 1998; Steptoe et al., 1995; Steptoe & Wardle, 1999). The FCQ was first developed by Steptoe et al. (1995) and consists of nine primary reasons consumers choose certain foods: health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concerns.

Conducting a literature study of the FCQ is crucial, even amidst numerous literature reviews on agrifood topics like food waste (Schanes, Dobernig, & Gözet, 2018), agrifood traceability (Feng, Wang, Duan, Zhang, & Zhang, 2020), functional foods (Granato et al., 2020), and agrifood transformation (Borsellino, Schimmenti, & El Bilali, 2020). The FCQ serves as a vital tool to delve deeper into understanding the specific factors influencing consumers’ food choices, encompassing psychological, cultural, and social aspects. These choices wield significant influence over the entire agrifood industry, impacting production, distribution, and marketing. Furthermore, FCQ research often addresses crucial health and food policy issues, hinting at the identification of evolving food preferences and informing tailored policies promoting healthier eating habits. Moreover, such literature studies provide the foundation for further research by identifying knowledge gaps and facilitating more in-depth investigations. In essence, the study of FCQs offers profound insights into consumers’ food behavior, which, despite the extensive literature on related topics, remains critical for both the agrifood sector and food policy development.
An earlier literature review on FCQ was conducted by Cunha et al. (2018) on articles published in the Scopus and Web of Science (WoS) databases until July 2017, focusing on cross-cultural and single-country studies. Therefore, performing an updated literature review of FCQ is crucial. Different from Cunha et al. (2018), this study integrated a scoping review and bibliometric analysis (ScoRBA) (Wijaya, Setiawan, Ahmad, Zakaria, & Othman, 2023) to review studies on consumers’ food choices until 2022. The ScoRBA approach was selected over native scoping review or bibliometric analysis methods because it allowed for a more systematic and efficient examination of FCQ research themes and trends. Unlike specific studies such as, which focused on cross-cultural and single-country studies, the ScoRBA approach encompassed a broader scope, capturing the full landscape of FCQ research themes and evolution. By leveraging bibliometric analysis and the pattern, advance, gap, evidence for the practice, and research recommendation (PAGER) framework, this ScoRBA approach enabled a comprehensive exploration of FCQ studies, offering insights into global trends, high-impact journals, leading countries, and content-specific areas. Thus, the approach provided a more holistic and nuanced understanding of the FCQ field, making it the preferred choice for this study. Through a comprehensive examination of existing literature, this study could contribute to the development of FCQs as a valuable tool for understanding and evaluating food choice preferences and behaviors.

RESEARCH METHOD

The study utilized data consisting of FCQ publications retrieved from the Scopus and WoS databases on January 12th, 2023. The core collection of WoS, including its primary citation indexes, encompassed more than 75 million records, and when other regional and subject-specific citation indexes were considered, the total number of records reached 155 million (Birkle, Pendlebury, Schnell, & Adams, 2020). On the other hand, Scopus has stood out as the leading abstract and citation database, encompassing a vast collection of over 20,000 peer-reviewed journals across various disciplines such as science, technology, medicine, social sciences, and arts and humanities (Fahimnia, Sarkis, & Davarzani, 2015; Mishra et al., 2016). These journals were published by renowned publishing houses, including Elsevier, Emerald, Informs, Taylor and Francis, Springer, and Inderscience, asserting coverage of over 76 million records (Baas, Schotten, Plume, Côté, & Karimi, 2020). While WoS has historically been the primary and most widely accessible database for bibliometric analysis, the emergence of Scopus, introduced by Elsevier, has established it as a significant competitor for conducting such analyses (Echchakoui, 2020). Scopus had a 20% greater citation analysis coverage than WoS, while Google Scholar provided inconsistent results (Das & Roy, 2022). However, the citation analysis provided by WoS offered better and more detailed graphs compared to Scopus, as WoS was designed to meet the users’ needs in citation analysis (Falagas, Pitsouni, Malietzis, & Pappas, 2008). Therefore, this study involved both Scopus and WoS databases and served as an update to the earlier literature review conducted by (Cunha et al., 2018).

A literature review comprises three steps (Muflikh, Smith, & Aziz, 2021): research question formulation, literature search, and evaluation of search results. In line with the
research objectives, four research questions were formulated as a guide for the literature search in this study: (i) What are the profiles of articles, authors, journals, and main countries in FCQ research? (ii) What are the current trends in FCQ research? (iii) How have the topics in FCQ research developed? Moreover, (iv) What are the implications for future FCQ research? The formulation of research questions served as a limitation in the literature search to ensure that the collected data met the required needs. Furthermore, the data collection was divided into two stages: article identification and screening.

**Article Identification**

The search strategy utilized the following search terms: TITLE-ABS-KEY (“food choice questionnaire”) was employed in Scopus, while “food choice questionnaire” (topic) was applied in WoS. These search terms were crafted to retrieve relevant documents related to FCQ. The keyword “FCQ” was included in the search terms; however, it yielded irrelevant results to FCQ. For example, several studies defined FCQ as a family communication questionnaire, a fear of the coronavirus questionnaire, and a family coping questionnaire. Hence, FCQ was implemented as the literature search term. The data search was carried out on January 12th, 2023, generating 166 publications in Scopus and 155 publications in WoS.

**Article Screening**

Article screening was run to determine the documents included in the review. Therefore, specific criteria were applied. Only journal articles published in the English language until 2022 and in the final stages were deemed eligible for inclusion. These criteria were established to concentrate on all FCQ literature in both databases and to ensure that language barriers did not obstruct the selection. Document selection was performed following a thorough evaluation of the title, abstract, and keywords to assess their relevance to the scope of this research. Both data were merged by eliminating existing duplications using RStudio software with “mergeDbSources” command after equalizing the data format using the export feature in bibliometrix, producing 169 journal articles ready for review (Page et al., 2021).

The PRISMA flowchart, depicted in Figure 1, was employed to illustrate the search visually and enhance transparency in the document selection. This flowchart delineated the number of documents identified during the initial search, the documents excluded following screening, and the ultimate number of documents incorporated into the bibliometric analysis and scoping review.

To answer the research questions, a ScoRBA approach integrating bibliometric analysis and scoping review was put into practice. Specifically, bibliometric analysis addressed the first to third research questions, while a scoping review answered the fourth research question.

**Bibliometric Analysis**

Bibliometrics is a well-known quantitative analysis of publications using massive and objective data (Donthu, Kumar, Mukherjee, Pandey, & Lim, 2021). This study utilized bibliometric analysis, including citation and co-occurrence analysis. Citation analysis provided
insights into three indicators: performance, novelty, and the influence of research publications based on documents, authors, journals, and countries, to address the first research question. Co-occurrence analysis provided an overview of how the determined keywords were related to
each other. This analysis unveiled the latest trend and development of FCQ research, thus answering the second and third research questions. VOSviewer tool was employed for bibliographic coupling and co-occurrence analysis, while Tableau Public was utilized for citation due to its ability to present all three indicators simultaneously compared to VOSviewer.

Scoping Review

The scoping review addressed the fourth research question, mapping the implications for future research on food choice motives using the FCQ. The scoping review was performed using the PAGER framework (Bradbury-Jones et al., 2022)—an extension of the scoping review framework by Arksey and O’Malley (2005). The PAGER framework was employed to overcome the limitations of the Arksey and O’Malley (2005) scoping review method by providing a consistent approach to analyzing and reporting literature review findings. The PAGER framework was applied to each research cluster identified from the previous co-occurrence analysis. The selection of papers reviewed in each cluster was based on the main research themes from clusters generated in the co-occurrence analysis (Wijaya et al., 2023). Furthermore, the reviewed journal articles were selected using the OpenRefine tool based on authors and keywords matching the research clusters.

RESULTS AND DISCUSSION

Main Articles of Food Choice Questionnaire Publications

Citation analysis was run to identify the articles employed as the main references in this FCQ research. Figure 2 depicts that the most frequently cited document was the article written by Steptoe et al. (1995) entitled “Development of a Measure of the Motives Underlying the Selection of Food: the Food Choice Questionnaire,” with 1,242 citations. The highest number of citations indicated the significant impact of this article on FCQ studies. This paper was the first to introduce the FCQ as a tool for studying the motives behind consumers’ food choices. The FCQ included nine main factors considered key influencers of consumers’ food choices: health, mood, convenience, sensory appeal, natural content, price, weight control, naturality, and ethical concern.

However, a relatively recent document entitled “The Eating Motivation Survey (TEMS)” by Renner, Sproesser, Strohbach, & Schupp (2012) was also widely cited in studies on food choice motives. This paper received 230 citations and had the highest normalized citations among the 168 other papers (widest bar in the graph), as exhibited in Figure 2. Compared to the paper by Steptoe et al. (1995), TEMS was claimed to provide a more detailed understanding of the motives related to food choices compared to FCQ. However, both FCQ and TEMS focused on assessing consumers’ motives for food choices.

Authors with the Most Published Works on Food Choice Questionnaire

The citation analysis displayed in Figure 3 uncovered five authors producing two to three papers. In short, no author was the most prolific in FCQ research. Thurecht and Pelly
contributed the most published work on FCQ with three publications: ‘Development of a New Tool for Managing Performance Nutrition: The Athlete Food Choice Questionnaire,’ ‘Key Factors Influencing the Food Choices of Athletes at Two Distinct Major International Competitions,’ and ‘The Athlete Food Choice Questionnaire (AFCQ): Validity and Reliability in a Sample of International High-Performance Athletes’. However, Figure 6 portrays that, in terms of the most-cited documents for each of the top five authors, Glabska, Skolmowska, and Guzek had the highest influence in FCQ research (widest bar in the graph). For example, their paper entitled ‘Population-based Study of the Changes in the Food Choice
Determinants of Secondary School Students: Polish Adolescents’ Covid-19 Experience (PLACE-19) Study’ received 76 citations from 2020 until the time of this research.

Main Journals of Food Choice Questionnaire Publications

As displayed in Figure 4, the citation analysis results unveiled that ‘Appetite’, ‘Food Quality and Preference’, and ‘Nutrients’ journals published the highest FCQ studies, with 25, 20, and 15 documents, respectively. These journals had also the highest normalized citations, with 36.83, 40.56, and 21.36, respectively. Hence, they were the most influential and often targeted for publications concerning consumers’ food choices using FCQ. However, the three most recent journals publishing FCQ studies were ‘The International Journal of Gastronomy and Food Science’, ‘Nutrients’ and ‘Foods’, with an average publication year score of 2021.5, 2020.53, and 2020.5, respectively, as illustrated by color in Figure 4. In other words, these journals could serve as alternative publication destinations for food choice studies in specific fields. For example, ‘Nutrients’ considered the publication of food choice studies providing novel insights into the impacts of nutrition on human health.

![FIGURE 4. CITATION ANALYSIS OF FCQ LITERATURE BY JOURNALS](image)

Notes: The length of the chart represents the number of publications in the journal. The color indicates a journal with recent publications (the lighter the green, the newer the publication). The width of the graph and its number demonstrate the influence of a journal (the wider it is, the more normalized the citations).

Main Contributing Countries of Food Choice Questionnaire Publications

Regarding publication distribution, Figure 5 exhibits that studies on individual food choice motives using FCQ have been conducted extensively for consumers in both developed
and developing countries. However, many of those studies were conducted in the high- and upper-middle-income countries, with 69.23% and 23.08% of 169 documents, respectively. It was not surprising considering that consumers in middle- and high-income countries led the likelihood of growth in the demand for better quality food, impacting their consumption choices and dietary diversity. The United States of America (USA), the United Kingdom (UK), Spain, Italy, and the Netherlands were the top five countries with the highest production of scientific articles on individual food choices using FCQ, with 26, 19, 13, 12, and 12 articles, respectively. In terms of normalized citations, these five contributor countries also possessed the highest normalized citations, with 19.37, 24.56, 15.01, 18.40, and 21.47, respectively. Other countries such as Belgium, Mexico, New Zealand, Portugal, Denmark, Finland, Malaysia, and Poland each had between six and nine publications.

![Figure 5: Citation Analysis of FCQ Literature by Countries](image)

Notes: The length of the chart represents the number of the country’s publications. The color indicates a publication in a country’s novelty (the lighter the green, the newer the country’s publication). The width of the graph and its number signify the influence of a country’s publication (the wider it is, the more normalized the citations).

**FIGURE 5. CITATION ANALYSIS OF FCQ LITERATURE BY COUNTRIES**

**FCQ Research Trend**

Figure 6 exhibits a rising trend in the number of published articles on food choice motives using FCQ from 1995 to 2022, with an annual publication growth rate of 11.73%. After 2010, a significant annual increase occurred in the number of articles compared to previous years. Ever since its establishment in 1995, researchers have demonstrated great enthusiasm for studying individual food choices using FCQ in the last decade. There were 169 publications utilizing FCQ from 1995 to 2022 in the Scopus and WoS databases.
Consumer studies using the FCQ have been conducted by researchers worldwide, such as in Brazil (da Silva, Marôco, Alvarenga, & Campos, 2022), Spain (Canales & Hernández, 2016), Russia (Honkanen & Frewer, 2009), Iran (Roudsari et al., 2020), Taiwan (M.-F. Chen, 2007), Hungary (Szakály et al., 2018), Lebanon (Koksal, 2019), and Indonesia, to understand (Maulida, Nanishi, Green, Shibanuma, & Jimba, 2016) individual food choices. In its development, the use of the FCQ in studies on consumers’ food choices varied depending on consumer segments and types of food. For example, Pollard et al. (1998) examined the tendency of food choice motives in specific groups using variables such as gender and education level, while Maulida et al. (2016) investigated the role of gender and family income. Concerning food types, FCQ studies have been conducted on organic food (Tung, Tsay, & Lin, 2015), environmentally-friendly food (Lidew et al., 2015), and low-sugar products (da Veiga, Johann, Lima, Kaushik, & Mitterer-Daltoé, 2021). Moreover, regarding research subjects, FCQ studies have developed a specific focus on certain consumer groups, such as adolescents (Canales & Hernández, 2016; Maulida et al., 2016; Ooi, Taib, Yusof, & Chin, 2015), and comparisons between different groups, such as adults and the elderly (Gong, Li, Xie, & Tan, 2020). Accordingly, the applications of the FCQ were diverse and evolved regarding the factors and measurement items. For example, Neupane (2018) employed the same factors developed by Steptoe et al. (1995). Other studies added factors such as media, friends, and parents (Ooi et al., 2015), as well as satisfaction and mental health (Gong et al., 2020).

As depicted in Figure 7, the most recent topics based on keywords were presented by co-occurrence overlay visualization, with average publication year scoring in VOSviewer. New and more specific research topic clusters have emerged since the establishment of FCQ in 1995, depicting individual food choices using FCQ as a new and growing field of study. With the years of publication ranging from 2018 to 2022 (on average), the most recent topics of studies on individual food choices were related to various topics such as consumer issues (e.g., delay discounting, health, body mass, consumption, eating disorder, psychology), consumer
segments (e.g., athlete, young adult), methods (e.g., food frequency questionnaire, survey, observational study, cross-sectional study), and research context or situations (e.g., Covid-19, Mexico). Supplementary Material 1 provides the detailed keywords for each cluster, along with their average publication year.

**FIGURE 7. CO-OCCURRENCE OVERLAY VISUALIZATION BY AVERAGE PUBLICATION YEAR OF FCQ LITERATURE IN EACH CLUSTER**

Main Topics of Food Choice Questionnaire Studies

A keyword co-occurrence analysis was conducted using VOSviewer software to determine the main and most recent research topics on FCQ studies. From 169 documents on FCQ studies related to food choice motives from the Scopus and WoS databases, 1,395 keywords were obtained. Many of these 1,395 keywords had similar meanings but appeared as different keywords due to differences in writing (for example, “attitude” and “attitudes,” “adolescent” and “adolescents”). Therefore, keywords with similar meanings were merged using a thesaurus. The criteria for selecting these keywords was that they appeared at least three times in VOSviewer, generating 252 keywords from the original 1,395 keywords to be processed using the thesaurus. In the end, 79 final keywords with different meanings were retrieved. The keyword “food choice questionnaire” was excluded from the co-occurrence analysis. In this study, a visualization map was constructed with a threshold of six keyword co-occurrences.

The network visualization results of the keyword co-occurrence analysis yielded four clusters of research topics on FCQ, as displayed in Figure 8. Each cluster consisted of a set of different keywords. The occurrence of keywords (links between keywords) within the same cluster was typically higher (stronger) than those between distinct clusters. The keyword
examination uncovered clear groupings within the keyword network with VOSviewer, as depicted in Figure 8. Table 1 lists the research themes for each cluster, organized by considering all keywords and their level of dominance within the cluster.

![Figure 8. Co-occurrence network visualization of FCQ literature](image)

**TABLE 1. CLUSTERS AND THEMES IN FCQ RESEARCH**

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Theme</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Red</td>
<td>Food choice motives and behavioral studies</td>
<td>The red cluster, comprising 24 keywords, centered on research related to food choice motives and behavioral aspects in dietary decisions. It explored the various reasons behind food choices and the behavior patterns influencing the dietary preferences of individuals.</td>
</tr>
<tr>
<td>2. Green</td>
<td>Nutrition, psychology, and health impact</td>
<td>The green cluster, with 22 keywords, delved into the psychological factors behind food choices, nutrition, and their impact on health, especially related to weight and nutrition outcomes.</td>
</tr>
<tr>
<td>3. Blue</td>
<td>Gender and dietary studies</td>
<td>The blue cluster, consisting of 18 keywords, examined the influence of gender on dietary choices and preferences, with a particular emphasis on gender-related aspects in food preferences.</td>
</tr>
<tr>
<td>4. Yellow</td>
<td>Adolescent food preferences</td>
<td>The yellow cluster, with 14 keywords, concentrated on the food preferences of adolescents, exploring decision-making, attitudes toward health, and various factors affecting food choices among young individuals.</td>
</tr>
</tbody>
</table>

The detailed keywords with their occurrence and total link strength for each cluster from 169 publications are provided in Supplementary Material 1. Furthermore, the four clusters of research topics on FCQ were employed as a basis for formulating recommendations for future FCQ research using a scoping review. Following the PAGER framework, these clusters represented pattern components.
Research Implications

A scoping review mapped the research implications for the future direction of consumers’ food choice motives using FCQ. Supplementary Material 2 exhibits the reviewed articles for each cluster. Table 2 lists the results of the scoping review using the PAGER framework on the reviewed articles in each cluster.

Notable gaps existed in food choice motives and behavioral themes from the red cluster. These gaps primarily revolved around understanding the linkage between food choice motives and actual dietary behaviors (Schliemann et al., 2019). Furthermore, the FCQ did not fully encapsulate the latest developments in norms related to food choice motives and other associated measurements (Konttinen et al., 2021). Hence, future research endeavors should focus on translating the reasons behind food choices into actual eating behaviors. Additionally, researchers should also consider incorporating new factors and expanding the range of items in their assessments to reflect recent developments in food choice patterns. The implementation of longitudinal studies was advised, allowing for the examination of consumers’ behavior over extended periods. These recommendations contributed to a more comprehensive understanding of food choice motives and behaviors.

Significant gaps and challenges within the green cluster dealt with topics like nutrition, psychology, and health impact themes. The challenges encompassed data incompleteness, missing data hampering key calculations, and the inherent limitations tied to cross-sectional study designs (Dias et al., 2021). Additionally, concerns about the use of self-reported data, particularly regarding weight and height, introduced biases that could undermine the accuracy of prevalence estimates (Locher et al., 2009; Mardon et al., 2015). To mitigate these challenges and enhance the quality of research within this cluster, future studies should adopt a longitudinal approach. The incorporation of mixed-method designs could help overcome the limitations associated with cross-sectional methods. Furthermore, researchers should explore innovative techniques like multiple imputation to improve data completeness and enhance the precision of key calculations. More robust and accurate research in the fields of nutrition, psychology, and health impact could be advanced by implementing these recommendations.

Noteworthy gaps and challenges within the blue cluster included gender and dietary studies. There was a need to recognize gender distinctions within specific dietary profiles (Dorard & Mathieu, 2021) and the importance of expanding the inclusion of socioeconomic factors and parameters in future research (Jáuregui-Lobera & Ríos, 2011). However, acknowledging the limitations associated with self-reported and memory-dependent data was crucial (Bryła, 2021; Dahal et al., 2022). Hence, future studies should replicate their investigations in diverse cultural contexts. It was essential for ensuring the generalizability of findings. Moreover, longitudinal research spanning various demographic categories, including age, ethnicity, income, and education levels, was also crucial. This approach provided comprehensive insights into food choices and dietary behaviors among different groups, helping to fill the identified gaps and challenges.
Significant gaps and challenges were evident in the adolescents’ food preference themes in the yellow cluster. These challenges comprised issues related to recall bias, limited...
population representation confined to a single country, and the omission of influential factors (Głąbska et al., 2021). Furthermore, cross-sectional study designs could hinder the establishment of causal relationships, requiring acknowledgment (Sesé et al., 2012). Hence, future studies should employ more comprehensive approaches focusing on longitudinal designs to address these gaps and enhance the quality of research within this cluster. The inclusion of objective measurements was essential to mitigate recall bias. These measures shed light on adolescents’ food preferences and the implications for health, allowing future research to address the observed issues and gaps.

Limitations

There were a few caveats to this study, but overall, it presented valuable insights into the prevailing research trends and themes in FCQ studies. To begin with, it only included papers published in English and accessible through the Scopus and WoS databases during this research period, potentially excluding relevant research from other databases, non-indexed journals, and non-English sources. The identification of research themes was based on keyword co-occurrence analysis without an in-depth examination of the content. However, these themes encompassed the majority of keywords within each cluster, gaining a comprehensive overview of FCQ literature. Finally, it was crucial to note that bibliometric analysis might not provide insights into the content and context of all studies, as this study focused on selected studies most relevant to the research objectives. To overcome this limitation, the PAGER framework was employed to ensure a more comprehensive scoping review of FCQ research.

CONCLUSION

Research on consumers’ food choice motives using FCQ revealed various aspects of dietary preferences and behaviors, with recent studies enriching the understanding of consumers’ motivation in food selection. Nevertheless, challenges related to data accuracy and study design persisted, prompting the need for further exploration. Seminal papers by Steptoe et al. (1995) and Renner et al. (2012) played pivotal roles in FCQ studies, while journals such as ‘Appetite,’ ‘Food Quality and Preference,’ and ‘Nutrients’ were influential platforms for this work. High-income countries, including the USA, UK, Spain, Italy, and the Netherlands, took the lead in FCQ research. Over time, specific research topics on individual food choices emerged, with recent themes focusing on consumer issues and segments, methods, and research contexts.

Critical implications emerged across various food choice research clusters. Hence, bridging the gap between motives and dietary behaviors by translating motivations into habits and employing longitudinal approaches was essential. To address data issues, mixed-methods, longitudinal, and innovative approaches were highly required in nutrition, psychology, and health studies. Concerning gender and dietary research, recognizing gender differences and expanding across diverse contexts through longitudinal studies was vital. For adolescents’ food
preferences, comprehensive research with long-term measurements was crucial to combat challenges. As the agrifood industry has evolved, especially in developing countries, updated FCQ studies focusing on specific foods or countries became necessary to understand changing consumers' preferences in the agrifood landscape.

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Conflict of interest: The authors declare no conflict of interest.

REFERENCES


Understanding Consumer Food Choice Studies using Food…… (Sudewo, Suprehatin, and Utami)


