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Education to Promote Healthy and Sustainable Eating Habits: A Bibliometric Analysis

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Abstract: Food production accounts for a substantial part of human activities' negative impact on planetary environmental stability. Although environmental education and education for sustainable development could both promote changes in this area, research often does not focus on their potential to build healthy and sustainable eating habits. Here, a bibliometric map of the scientific literature is outlined, revealing trends and opportunities for research on this topic. The SPAR-4-SLR protocol was used to collect a large sample (RQ_1 sample: n = 2067) and, subsequently, a narrow sample (RQ_2 sample: n = 256) of research works on this topic. The sampling process and data treatment were undertaken in RStudio. The bibliometric analysis shows that scientific research in this area is increasing exponentially in quantity (R^2 = 0.926). However, the model also indicates that quality standards have been decreasing ($\beta = -0.951$ $p < 0.001$), with a high adjustment (R^2 = 0.803). Cross-statistical corroboration points in the same direction ($r = -0.541$ $p < 0.01$). Authorship quality has low consistency among publications focused on eating-habit education from an environmental sustainability perspective. The emerging topics are meat consumption, behavior, attitudes, and the Mediterranean diet. This research unveils gaps to be explored in future research on education for sustainable development (and environmental education) to foster healthy and sustainable eating habits, and contributes to the discussion on the quality standards of scientific research.

Keywords: education for sustainable development; environmental education; health education; nutrition education; sustainable food consumption; healthy food consumption; literature analysis

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1. Introduction

Contemporary human activities have been causing social, economic, and environmental problems [1,2]. By crossing six out of nine thresholds that regulate and enable life, the Earth Life-Supporting System is close to the verge of non–Holocene-like conditions [3]. Food production accounts for 70% of the world's water consumption. At the same time, it is responsible for 50% of land use, drives 90% of deforestation in the tropics, causes 78% of eutrophication, and emits nearly one-third of greenhouse gas emissions [1,4–6]. At the current scale, livestock production requires feeding with animal food. Frequently, this animal food is composed of soy, which is a major driver of tropical deforestation [7]. Improvements in food systems, particularly resource efficiency in agricultural production and livestock feeding, should be considered [8].

According to the EAT-Lancet Commission report, Western (or Global North) countries consume too much animal protein and rely on imports to meet their needs [9,10]. These eating habits demand high levels of resource exploitation and exacerbate environmental instability [10]. Springmann et al. (2018) predict that, by 2050, the food demand for animal protein products will double compared to 2010 levels. Also, changing eating habits could lead to a 70% reduction in greenhouse gas emissions, while technological innovations would not go beyond a 10% decrease in the carbon footprint from food consumption [11]. However, reducing meat consumption is a difficult task, because it depends on intrinsic and extrinsic factors [12,13]. This sector also accounts for a significant environmental impact due to food waste, which must be reduced to improve its efficiency [14–17].

There are numerous approaches to mitigate our negative environmental impact; many of them involve changing our consumption habits [2,18–22], namely, our food choices, which are currently a major ecological threat [1,2,23,24]. Simultaneously, unsustainable eating habits constitute a risk factor for individual health [23,25,26]. By building healthy eating habits, the ecological footprint associated with food consumption could be reduced [27–30]. The World Health Organization recommends a higher consumption of fruit, vegetables, and legumes, along with a reduced intake of animal protein than is currently consumed in the Global North's population [26].

Research has led to improvements in the efficiency and environmental sustainability of food production [31,32]. Nevertheless, education may also encourage change, although educational research remains far from fulfilling its change-promoting potential [2,33–38]. Some studies have underlined the role of education in encouraging the adoption of more sustainable and healthier food consumption [13,14,34,36,39–44], and in instigating planetary stewardship [45]. Despite education being an effective change-promoting tool, many factors play a role in an individual's eating habits [15,16], and it is necessary to reach a better understanding of these to foster sustainable food consumption [46–49]. Educational curricula and programs that promote healthy eating habits should include meaningful reflections on resource exploitation associated with food production, distribution, consumption, and disposal.

This research has emerged from the need to establish a numerical quantification of the scientific literature on the topic under study, and to understand the evolution of the current research paradigm. An epistemological position will allow us to frame this research properly. As stated by Khun, science tends towards "normal science"; after a high production period with substantial outputs, science stabilizes into a specific paradigm by not being able to continue advancing quickly and substantially [50]. By performing this bibliometric analysis, a broad map of the scientific literature is drawn [22,39,42,47,49,51–53], enabling us to frame a more in-depth outlook of the current scientific paradigm. The aim is to reveal gaps and pave opportunities to set a track for future research [52], shifting away from paradigmatic inertia.

2. Materials and Methods

The SPAR-4-SLR protocol was used as a systematic procedure for literature collection [54], as it has demonstrated effectiveness in assembling bibliometric data [49,53]. A schematic representation to elucidate how the SPAR-4-SLR protocol was operationalized is displayed below (Figure 1) [49]. This research has a bibliometric purpose, so it utilizes quantitative procedural analysis, which has demonstrated good results in assessing the literature and in perceiving trends and emerging research topics [22,39,47,49,53]. Our research does not constitute a tautology study, despite it being based on some analysis parameters of previous bibliometric analyses [22,39,42,47,49] and on methodological procedures on how to conduct this type of research [51–56]. Two Research Questions (RQs) were formulated to guide this research.

RQ_1: How has scientific research on education about eating habits evolved quantitatively and qualitatively from a Nutrition or Health (NH) and Environmental Sustainability (ES) scope?

RQ_2: What are the trends and subtopics with emergent relevance to education concerning scientific research on eating habits from an Environmental Sustainability (ES) view?

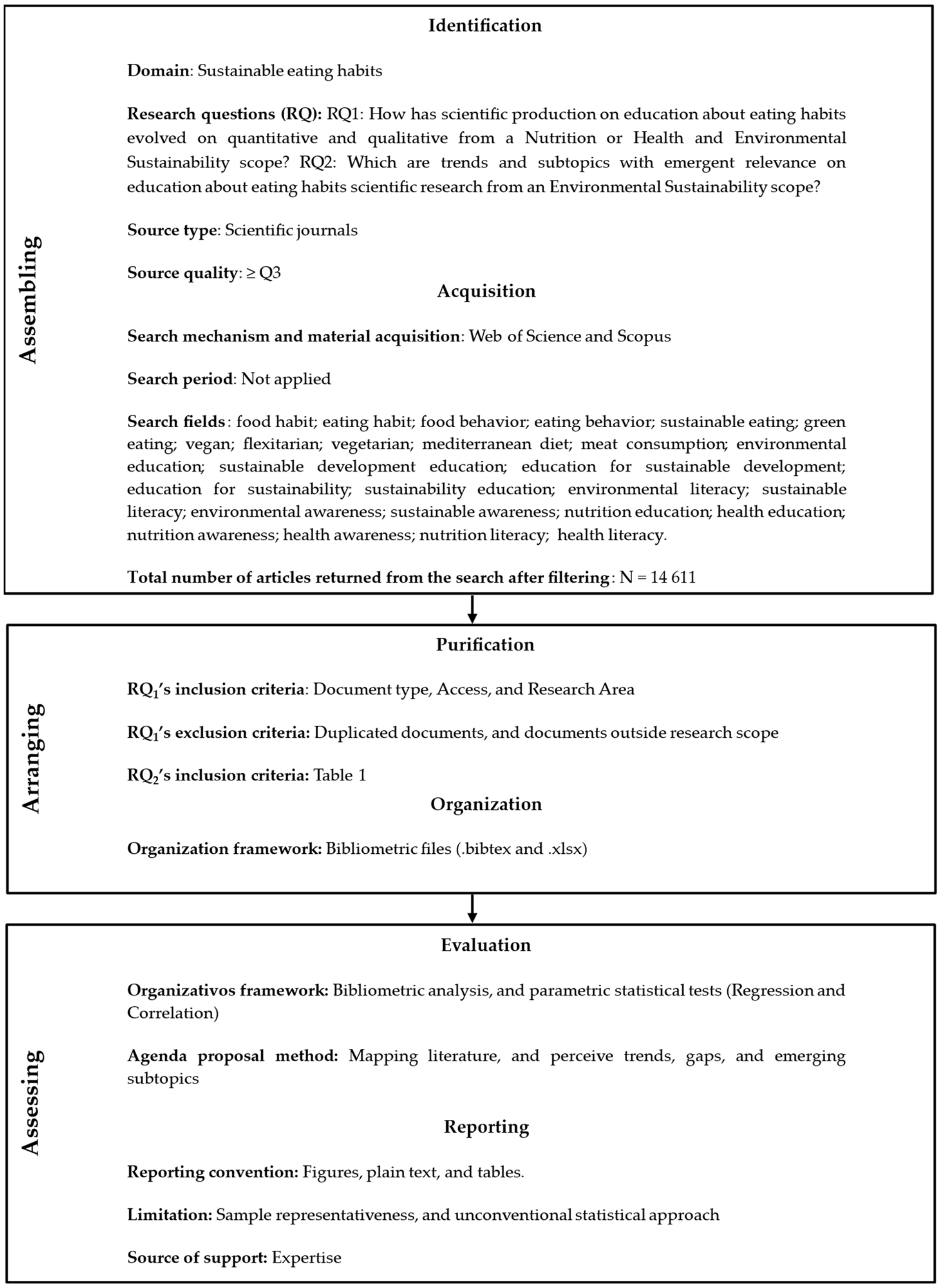

Figure 1. Schematic operationalization of the SPAR-4-SLR protocol [49,54].

RQ_1 tries to encompass the transdisciplinary element intrinsic to eating habits as it establishes the main research-focused areas working on this broad topic, e.g., Refs. [18,20]. The literature assembling process had two stages: primarily, collecting the RQ_1 sample, and later, narrowing the RQ_2 sample from the prior sample. Further explanation of the sampling process for these two research samples is explored.

2.1. RQ_1 Sampling

Bibliometric data were collected from Scopus and Web of Science. The procedure differed between the two platforms; on Web of Science, the search included "food habit"; "eating habit"; "food behavior"; "eating behavior"; "sustainable eating"; "green eating"; "vegan"; "flexitarian"; "vegetarian"; "Mediterranean diet"; and "meat consumption", separated by "OR". The search was filtered by Document Type, Access, and Research Area, according to the criteria illustrated in Figure 2. Then, thematic restriction was sought by applying the obligation operator (should include) in the platform's search field to include, separately, "environmental education"; "sustainable development education"; "education for sustainable development"; "education for sustainability"; "sustainability education"; "environmental literacy"; "sustainable literacy"; "environmental awareness"; "sustainable awareness"; "nutrition education"; "health education"; "nutrition awareness"; "health awareness"; "nutrition literacy"; and "health literacy". NH and ES are the research focus of RQ_1. These are the main research areas that study eating habits, e.g., Refs. [22,24], and can therefore represent a comprehensive map of the literature concerning education on healthy and sustainable eating habits.

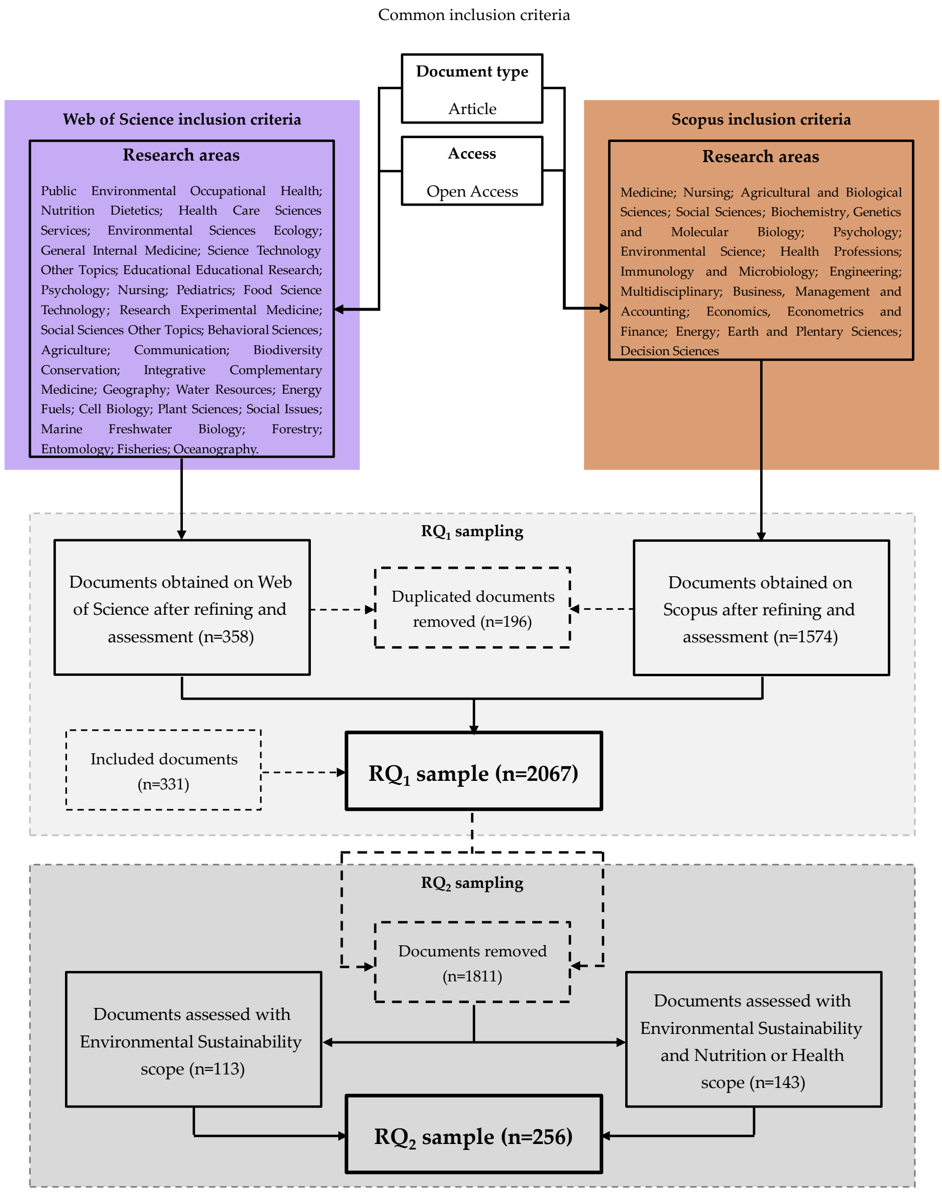

Figure 2. Schematic representation of the sampling process.

On Scopus, a different obligation operator ("") was used on the same search keywords. The search was separated by the addiction Boolean Operator (AND) between the eating-related keywords and the education-related keywords. Different filters were applied, depending on the Document Type and Access. The Web of Science search results were merged with Scopus' results using the RStudio (v. 12.1; Build 402) "mergeDbSources ()" package, and duplicated documents (n = 196) were removed to obtain an initial sample

(n = 1736). After analysis, we included documents (n = 331) to improve the sample representation of this research topic and obtain the RQ_1 sample (n = 2067).

2.2. RQ_2 Sampling

The RQ_2 sample (n = 256) is a narrowed sample obtained from the RQ_1 sample (n = 2061). By refining the search from the RQ_1 sample and counting 434 documents, an individual assessment of abstracts was conducted (see Supplementary Materials). By establishing that documents should have an ES purpose, we distinguished those that focused simultaneously on NH and ES from those whose research scope was aligned exclusively with ES. Data were assessed and scrutinized individually based on common categorization parameters (Table 1). This methodological approach may transparently eliminate ambiguity and arbitrary decision-making. Table 1 indicates the content analysis parameters for the abstract and research paper screening.

Table 1. Categorization criteria for RQ_2 sampling.

Research Scope		Parameter
Environmental Sustainability (S)	S1	Research focused on education for sustainable eating habits.
	S2	Research focused on sustainable eating habits.
	S3	Research focused on sustainable food production, distribution, and/or consumption.
	S4	Research focused on the sustainability of food systems.
	S5	Research focused on perceptions, attitudes, and behaviors related to food production, distribution, and/or consumption from an environmental sustainability standpoint.
Nutrition or Health and Environmental Sustainability (B)	B1	Research focused on nutrition or health problems explicitly associated with unsustainable eating habits.
	B2	Research focused on nutritional education that encompasses sustainable eating habits.
	B3	Research focused on education for sustainable development that encompasses nutrition.
	B4	Research focused on perceptions about and/or common practices and/or the acceptability of flexitarian, vegetarian, vegan, or Mediterranean diets, or any other diet that relates to diminishing one's food footprint.
	B5	Research focused on the nutritional and/or health benefits of sustainable eating habits.

This table embodies the categorization parameters regarding the scientific research scope.

2.3. Bibliometric Analysis

The bibliometric analysis gathered different information due to the dual nature of RQ_1 and RQ_2. Analysis parameters of previous research on similar topics were taken into consideration [22,39,42,47,49]. Every statistical procedure was conducted on Microsoft Excel (v. 2403; Build 16.0) and Statistical Package for the Social Sciences (SPSS) (v. 29.0.0.0; Build 241) after treating the data with the Rstudio's *Bibliometrix* package (v. 12.1; Build 402).

Firstly, scientific research was divided according to the number of publications, as seen in the literature [39]. The evolution of scientific research was shown through graphical representation, not including all previous research periods or the year 2024. An exponential trendline was traced to corroborate the evolutionary trend illustrated, and its adjustment was verified by the coefficient of determination (R^2) [41]. The year 2024 was removed from the graphical representation because it weakens the adjustment to the traced trendline and was incomplete at the time of this analysis.

After quantifying the scientific research on eating habits, the focus shifted to the quality standards of the literature. The quality standards of scientific research continue to promote controversial debates, as ranking measures mainly account for the number of publications [57]. Frequently, citation-related indicators could verify the relevance of scientific research [22,39,42,47,49]. As such, the designated variables were scientific research (SP) or Years, mean citations per article (MC), and the potential of being cited (PC). The PC was calculated as the ratio of the MC by citable years. Citable years were calculated by subtracting the last year of publication (2024) from the *n*-year of publication, with the exception of the last year, which counted as one because citable years cannot be zero.

Subsequently, a Categorical Regression was carried out to identify the evolutionary trends of publications' quality, since Years represents an ordinal variable, while both the MC and PC are scale variables. For these types of variables, this procedure is endorsed by the scientific literature [58]. The Categorical Regression, with optimal scaling using alternating least squares, was modelled considering Years as the independent variable, and MC and PC as dependent variables or predictors. The model's maximum prediction error (0.288) in its first iteration, with moderate adjustment (R^2 = 0.713), was insufficient to dismantle the model's coefficient (β). By its 8th iteration, the prediction error was even lower (0.197), with a greater coefficient of determination (R^2 = 0.803). Therefore, the model efficiently identifies and predicts the trends undertaking these dependent variables (MC and PC), considering Years as the independent variable. To verify the strength and direction of the relationships between the variables, a Correlation Test was applied. The variables designated for the Correlation Test were the SP, MC, and PC. The last two statistical tests trace a trend over time (Categorical Regression) and the accumulated research production (Correlation Test) (see Supplementary Materials). Thus, these bibliometric analytical methods resulted in the display of the current scientific paradigm outlook of this research topic.

Part of the RQ_1 analysis was to categorize scientific research on eating habits with an ES scope, and with an ES and NH scope. In this categorization, the RQ_1 sample (*n* = 2067) was narrowed to (*n* = 434), from which the abstract content and some main paper corpora were individually assessed (Table 1). This procedure dually outputs the RQ_2 sampling process and part of the bibliometric analysis as disciplinary categorization (see Supplementary Materials).

With the RQ_2 sample assembled, an initial assessment of the paradigm of the research was conducted to gain a better understanding. Some analysis methods were replicated, specifically the quantitative evolution of the scientific research using a trendline and the coefficient of determination (R^2) to verify its evolutionary tendency. Nevertheless, neither a Categorical Regression nor Correlation Test was carried out due to the RQ_2 sample size. Additional data were analyzed based on common scientific relevance parameters, such as the number of publications and h-index [55] and Lotka's Law [56], using a square root with an adjusted trendline to verify authors' productivity on this topic [42] and the authorship consistency parameter, respectively. Despite the standard error of the RQ_2 sample on Keyword Plus (SE = 0.191), it was used as a parameter for thematic analysis due to its bibliometric potential to perceive trends [20,37,40,42,47,49,51] and non-redundant data compared with using Author's Keywords. The profiles of Global South and Global North countries were in accordance with the United Nations Conference on Trade and Development guidelines [59].

3. Results

The results section is divided into two subsections that exhibit the data collected to quantify and assess the quality of scientific research on eating habits, and, separately, research trends on sustainable eating habits, thus attending to RQ_1 and RQ_2, respectively.

3.1. Quantity and Quality of Scientific Research on Eating Habits (RQ_1 Sample)

In assessing eating habits research, a large sample of bibliometric data (RQ_1 sample: *n* = 2067) was gathered and assembled. The scientific research was periodically divided based on quantitative criteria (Table 2). Chronologically separating the literature based on the number of publications is a common practice in bibliometric analysis to better understand and scrutinize the literature [39].

Table 2. Periods of annual scientific research.

Period	Years	Period Name	Scientific Research	Average Production per Year
1	[1970:1990]	Embryonic	17	0.85
2	[1991:2009]	Infant growth	225	11.84
3	[2010:2024]	Growth	1825	114.06

The data were narrowed to Period 2 and Period 3 because Period 1 does not represent a significant portion of the scientific research (% = 0.82). The scientific research focusing on eating habits has been increasing (Figure 3), highlighting the high interest in this research topic [22,24,28,29]. By excluding the year 2024, a trendline was traced, resulting in a well-adjusted, observable, exponential growth pattern (R^2 = 0.926).

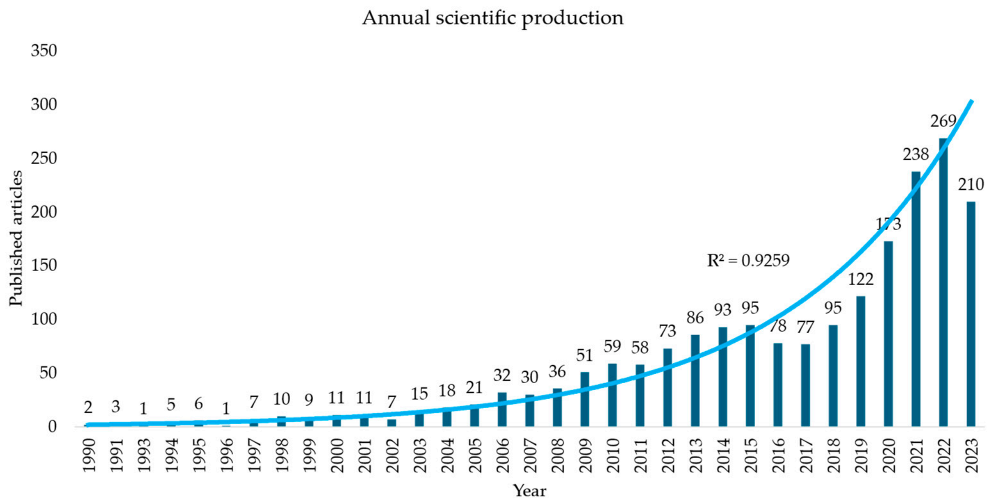

Figure 3. Annual scientific research on eating habits narrowed to Period 2 and Period 3.

The number of citations is frequently established as a parameter for scientific relevance [39,40,47,49] or as an indicator of the scientific quality of publications. Therefore, mean citations per article (MC) and the potential of being cited (PC) were analyzed, as previously stated. A Categorical Regression was conducted on the MC and PC to identify an evolutionary trend in Period 2 and Period 3—reconsidering the year 2024. The Categorical Regression established a decreasing model ($\beta = -0.951$), which obtained a statistical significance value ($p < 0.001$) and a high coefficient of determination ($R^2 = 0.803$) (Table 3).

To support prior results, a Correlation Test was carried out to determine the direction and intensity of the relationships between scientific research (SP), mean citations per article (MC), and potential of being cited (PC) (Table 4). The Correlation Test verified a moderate negative relationship between SP and MC ($p < 0.01$), and a moderate positive relationship between MC and PC ($p < 0.01$).

The RQ_1 implicitly includes a categorization of scientific research based on the research area (Figure 4). Our bibliometric sample showed a hegemonic representation of NH (% = 87.6) compared to publications focused on both ES and NH (% = 6.92) or only on ES (% = 5.47).

Table 3. Categorical Regression results.

Modelling Performance				
R	R^2	R^2_{adj}	Apparent Prediction Error	
0.896	0.803	0.750	0.197	
ANOVA				
	SS	gl	MS	F
Regression model	27.302	7	3.900	15.140 *
Residuals	6.698	26	0.258	
Coefficients				
	β	Bootstrap Error	gl	F
MC	−0.951 *	0.111	3	72.901 *
PC	0.502 **	0.255	4	3.862 **

Categorical Regression was performed in SPSS from modelling with Years as the independent variable and both MC and PC as predictable variables. * $p < 0.001$ ** $p < 0.05$.

Table 4. Correlation Test.

	SP	MC	PC
SP	1		
MC	−0.541 *	1	
PC	0.151	0.551 *	1

These values refer to the Pearson's Coefficient and were obtained by conducting a Correlation Test in SPSS. * $p < 0.01$.

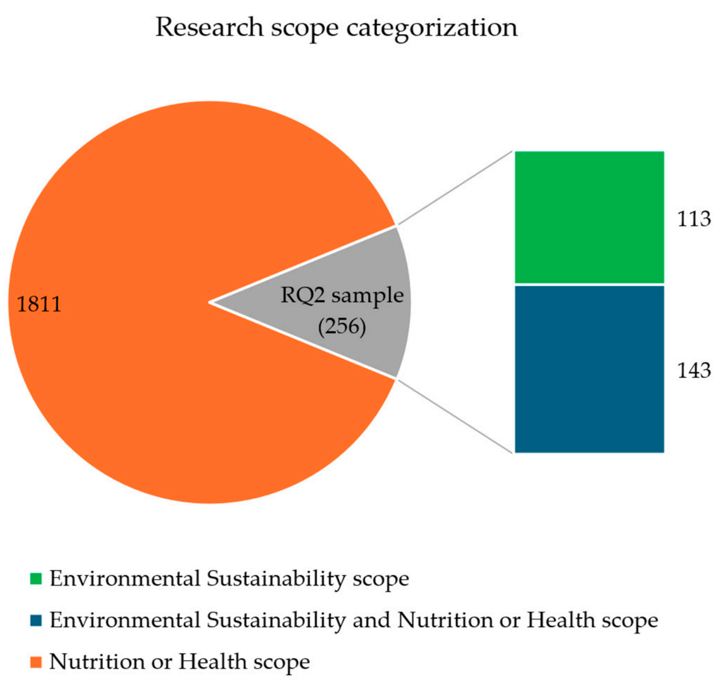

Figure 4. Research scope categorization according to the criteria previously exhibited (Table 1).

Other bibliometric analyses have included a geographical distribution of authorship [39,42]. The RQ_1 sample geographical distribution of authorship had a small standard error (SE = 0.0852). Global South countries (n = 460; % = 22.3) publish less on eating habits than Global North countries (n = 1431; % = 69.2). The countries with the highest authorship contributions are the United States of America (n = 431; % = 20.9), Spain (n = 148; % = 7.16), Brazil (n = 122; % = 5.90), the United Kingdom (n = 93; % = 4.50), China (n = 92; % = 4.45), and Australia (n = 88; % = 4.26).

3.2. Research Trends for Sustainable Eating Habits (RQ$_2$)

As previously shown, research on eating habits has mainly been approached through Nutrition and Health Sciences. This prevalence led us to the RQ$_2$ sample set. Eating habits is a broad topic with an inherent interdisciplinary understanding [11–13,28–30]; consequently, the RQ$_2$ sample set was compiled to include research focusing individually on ES or simultaneously on ES and NH. The *Bibliometrix* package in RStudio was used to analyze potential emerging topics and research gaps within the ES scope.

To assess the trends in this research topic, the status of the research was examined. Scientific research within this scope started later, but it is also growing rapidly, with a near-exponential pace verified by a high adjustment (R^2 = 0.927) (Figure 5). Using either the number of publications (*n*) or h-index (Zone) as a parameter for the scientific relevance of journals, the most prominent scientific journals were Sustainability (*n* = 65; Zone 1), the International Journal of Environmental Research and Public Health (*n* = 24; Zone 1), Nutrients (*n* = 13; Zone 2), Foods (*n* = 12; Zone 2), Frontiers in Sustainable Food Systems (*n* = 7; Zone 2), Environmental Education Research (*n* = 5; Zone 2), PLoS ONE (*n* = 5; Zone 2), Appetite (*n* = 4; Zone 2), and the Journal of Cleaner Production (*n* = 4; Zone 2).

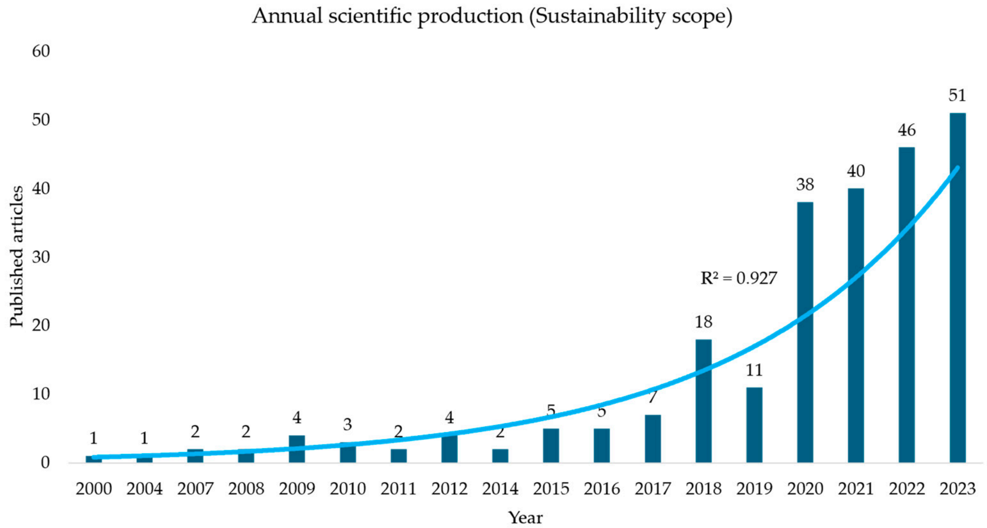

Figure 5. Annual scientific research on eating habits within an Environmental Sustainability scope.

The data indicate that a small portion of authors have published continuously on eating habits within the ES and NH scope (Figure 6), showing a well-adjusted trend (R^2 = 0.9993). In the RQ$_2$ sample (*n* = 256), authors had mainly published one article (% = 94.4), while only a few had published two (% = 5.20), three (% = 0.3), or four (% = 0.1) articles.

The frequency of Keyword Plus showed that subtopics related to NH are well-established in the literature and are Motor Themes. However, a detailed analysis of clusters indicates that education for sustainable development and nutrition has also been covered. Scientific research which links health, food consumption, and its impacts (e.g., climate change) is emerging and possesses a high relevance degree (Figure 7). Among the 150 most frequent Keyword Plus terms, the subtopics of "meat consumption" (% = 20.7), "behavior" (% = 20.0), "attitude" (% = 19.3), "sustainable development" within the education cluster (green) (% = 12.0), "Mediterranean diet" (% = 6.67), and "environmental education" (% = 6.00) are prominent in terms of graphical placement and occurrence (Figure 7).

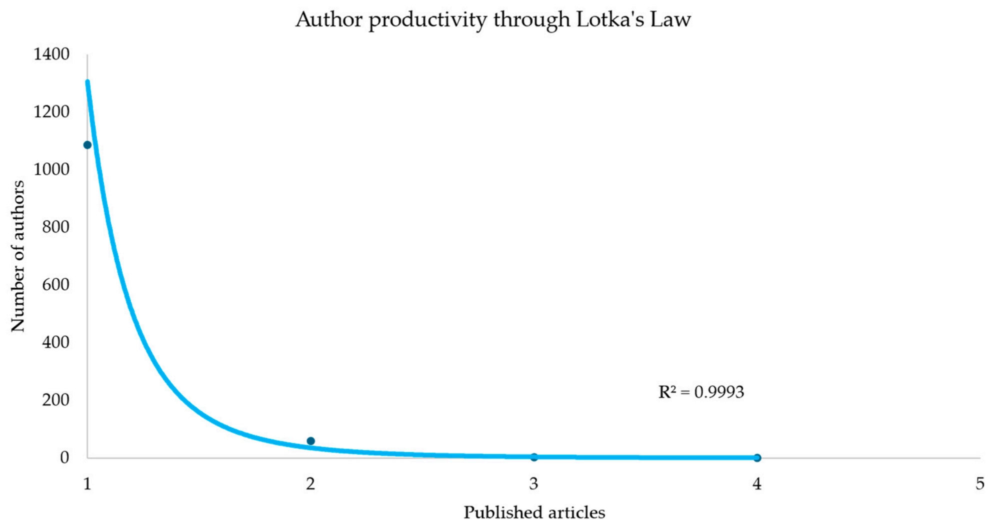

Figure 6. Author productivity through Lotka's Law.

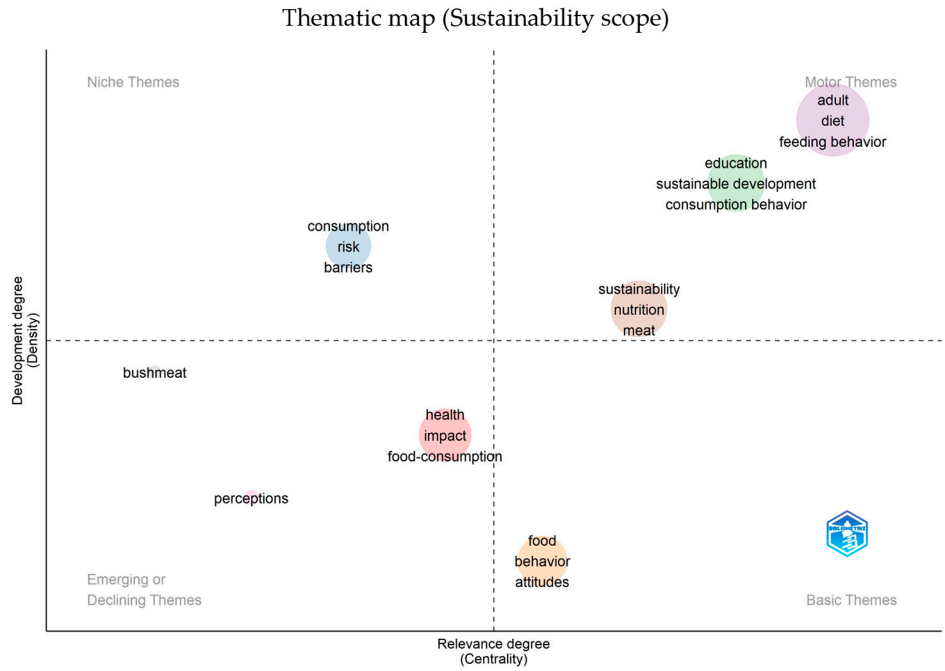

Figure 7. Thematic map using Keyword Plus on the RQ_2 sample.

The RQ_2 sample had a small standard error due to the absence of some authorship geographical distribution (SE = 0.0469). However, it remains clear that Global South countries (*n* = 52; % = 20.3) contribute less to the authorship of scientific publications on eating habits with an ES scope than Global North countries (*n* = 192; % = 75.0). The countries with the highest authorship contributions are the United States of America (*n* = 25; % = 9.77), China (*n* = 20; % = 7.81), Germany (*n* = 20; % = 7.81), Portugal (*n* = 16; % = 6.25), the United Kingdom (*n* = 16; % = 6.25), and Spain (*n* = 15; % = 5.86).

4. Discussion

Chronological separation of the literature according to the number of publications has led to a better understanding of scientific research evolution, as other research has shown [39]. Three periods were distinguished (Table 2); disregarding Period 1 because it represents a small portion of the RQ_1 sample enhanced the analysis (% = 0.82). However, we highlight the early first publication date of studies focusing on eating habits (Table 2), which indicates that this is a well-established topic in NH Sciences (Figure 4). Another methodological option that should be discussed is the removal of the year 2024 from the representation of the scientific research graphical evolution, which led to a more adjusted trendline (Figures 3 and 5). As in other bibliometric analyses, we perceived a near-exponential increasing trend in the amount of annual scientific research [39,42,47,49].

The Categorical Regression model pointed to a decrease in the quality of scientific publications (β = −0.951) and obtained a statistical significance value ($p < 0.001$) with a high coefficient of determination ($R^2 = 0.803$) (Table 2). Pearson's Correlation Test indicated a negative relation between SP and MC ($r = -0.541$ $p < 0.01$). By gathering dual corroborative statistical results, firstly, the null hypothesis was rejected; secondly, it was determined that the quality of scientific research is likely decreasing, representing the instability of the current paradigm. The quality standards of scientific research have been debated, because quantitative ranking measures may not be suitable for assessing the quality of scientific outputs [57]. The Categorical Regression establishes a trend through time (with Years as the independent variable). Simultaneously, the Correlation Test identifies the co-occurrence direction and intensity of the SP, MC, and PC variables. Together, they show the relationship between accumulated scientific research and its quality evolution. Ultimately, this bibliometric analysis enables an understanding of quality standards over time and through the development of the literature corpus (Tables 2 and 3). These procedures expand the discourse around the quality evaluation of scientific research within parametric statistical standards by obtaining cross-corroborative results. The amount of scientific research has been decreasing over time, with its production slowing down; hence, These indicators likely verify that this research topic has reached what Thomas Kuhn has called "Normal Science", that is, a period without meaningful contributions [50]. Future research must undoubtedly prioritize novelty in scientific outputs, going beyond more traditional research, including planetary sustainability in eating habits education.

The NH scope in the study of eating habits is the most represented (% = 87.6). These data reinforce the existing scope for research on eating habits with a focus on ES [34–41]. Lotka's Law indicates low consistency in authorship, expressed in non-continuous publication within the ES research scope ($R^2 = 0.999$) (Figure 6). This finding corroborates previous assumptions and verifies that ES research is an ongoing research field yet to be fully established. Additionally, the present bibliometric analysis points out that education for sustainable development may have research and educational potential, as mentioned in the literature (Figure 7) [21,28,35,41]. There are some other subtopics, such as "environmental education", that could be further explored by research and as an educational approach to foster healthier and more sustainable food consumption [28,38,41,43,44,47]. A shift in policy agendas toward promoting education for sustainable development and environmental education activities and campaigns may enhance the so-needed healthiness and sustainability of eating habits [13,28–30,41,43], while promoting critical skill development by preparing individuals to be planetary stewards with geoethical concerns [45].

Despite being the most affected and vulnerable societies [2,6], this research verifies what other research literature has reported, in that Global South countries are the least represented sources of authorship on eating habits [39,47]. The least favorable regions should be provided with sufficient food to satisfy their nutritional needs, as well as with the human and financial resources needed to enable progress by producing high-quality research.

5. Conclusions

Food production must shift toward sustainable practices, as it poses several social, economic, and environmental challenges. Individuals' eating habits demand high levels of resource exploitation due to the prevalence of animal protein in food consumption patterns. By changing individuals' dietary choices, humans can mitigate the environmental impact of food systems. Education must encourage healthy and sustainable eating habits, contributing to a systemic transition. The scientific literature on eating habits has increased quantitatively, but the quality standards of research are likely decreasing. Educational practices and programs to promote sustainable eating habits are less covered by scientific research, but have recently been attracting attention. These bibliometric analysis results indicate that raising the environmental awareness of food consumption's ecological impact should be integrated into all educational activities on eating habits, since education on eating habits has been thematically lacking in its approach to environmental sustainability. It should also be noted that many of the latest publications address both educational purposes. Research on food consumption can benefit from the education for sustainable development (or environmental education) perspective, namely, assessing pedagogical strategies and approaches that can foster healthy and sustainable eating habits that grasp and merge nutrition and sustainability into educational settings. Moreover, research should prioritize the quality of scientific outputs and the societal and environmental impact of such research to bring about meaningful change. It is important to maintain and strengthen ecological awareness through environmental education programs, practices, and campaigns to encourage healthier food choices and explain the Earth's natural systems. Doing so highlights the human benefits of reducing the ecological footprint associated with food consumption.

6. Study Limitations

As with other bibliometric analyses, and despite the broadness of the RQ_1 sample, which included the most relevant literature, this study could not be representative of the entire scientific research literature corpus on eating habits.

Supplementary Materials: The following supporting information can be downloaded at: https://www.mdpi.com/article/10.3390/su16229750/s1, Figure S1: Schematic operationalization of the SPAR-4-SLR protocol; Figure S2: Schematic representation of the sampling process; Figure S3: Annual scientific research on eating habits narrowed to Period 2 and Period 3; Figure S4: Research scope categorization according to criteria previously exhibited; Figure S5: Annual scientific research on eating habits with Environmental Sustainability scope; Figure S6: Author productivity through Lotka's Law; Figure S7: Thematic map using Keyword Plus on the RQ_2 sample; Table S1: Categorization criteria for RQ_2 sampling; Table S2: Periods of annual scientific research; Table S3: Categorical Regression results; Table S4: Correlation Test.

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