



Findings on dietary characteristics among Haitian immigrants and the threat of food insecurity: A scoping review

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ARTICLE INFO

Keywords:

Haiti
Human migration
Nutrition
Diet quality
Food insecurity
Public health

ABSTRACT

Objectives: This study aimed to map and describe the available evidence on dietary characteristics and diet-related health conditions among Haitian immigrants across the globe.

Study design: Scoping review.

Methods: This review was based on the international guide Preferred Reporting Items for Systematic review and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR). The searches were conducted in several electronic databases in July 2023. Reports focusing on diet, nutrition, and diet-related health conditions among international Haitian immigrants published in English, Portuguese, French, or Spanish with no year limit were included. The data extracted was tabulated and presented in a narrative summary.

Results: Database search retrieved 502 records, of which 30 met the inclusion criteria. The categories that emerged from the analysis were: food consumption patterns and trends, food and nutrition insecurity, cultural identity, and diet-related health conditions. Findings suggest: available evidence underrepresents Latin America and the Caribbean context; research gaps related to adolescents and the elderly and also to noncommunicable diseases except obesity; changes in food consumption after immigration towards less healthy eating; the Haitian immigrant's preference for healthy and traditional eating patterns; many experiences of food insecurity related to poverty, unemployment, and lack of social support, especially in host countries in Latin America and the Caribbean; and a high prevalence of obesity, especially among women.

Conclusions: Further research is required in countries in Latin America, mainly. Diet-related chronic diseases, adolescents, and the elderly should be targeted for further research. We recommend: longitudinal and qualitative research; field action reports describing local and global strategies to manage Haitian migration-related food and nutrition issues; culturally appropriate dietary interventions; and policies to protect and support the most vulnerable Haitian immigrants to have their fundamental right to adequate food guaranteed, reducing health inequalities.

1. Additions to literature

- Haitian immigrants may experience food insecurity and unhealthy nutrition disproportionately, likely due to a situation of social vulnerability since they prefer healthy and traditional eating patterns.
- The majority of the studies are cross-sectional, which cannot provide a comprehensive view of the dynamic and complex phenomenon of dietary acculturation.

2. Implications for policy and practice

- We recommend implementing a research agenda based on the research gaps we highlighted to support healthcare professionals and decision-makers, respectively, in designing culturally appropriate dietary interventions and implementing health programmes and policies addressed to food and nutritional security, ensuring health equity for Haitian immigrants.
- More longitudinal and qualitative research is needed to better understand dietary acculturation and the socioeconomic determinants of food insecurity among Haitian immigrants.

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<https://doi.org/10.1016/j.puhip.2024.100520>

Received 16 January 2024; Received in revised form 3 May 2024; Accepted 19 June 2024

Available online 22 June 2024

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3. Introduction

Changes in traditional eating patterns since migration have been associated with detrimental effects on the diet that lead to an increase in chronic diseases in migrants in general, threatening their health and the public health system [1,2].

The concept of *dietary acculturation* has been used to denote the process by which a racial or ethnic group adopts the dietary patterns of a host group [1–3]. Whereas, the concept of the *healthy immigrant effect* has been used to propose that immigrants may arrive in the destination country in a better health state than that of native citizens, but then immigrants with an increased length of residency experience a decline in their health [2,4–6]. However, the mechanisms through which diet may change and influence immigrants' health are complex and multidimensional [1,3,7]. For instance, the strength of the immigrants' cultural identity and the specific adaptation strategies adopted are important variables. The degree of the *nutrition transition* (a concept used to describe shifts in dietary consumption and energy expenditure that match with economic, demographic, and epidemiological changes at a population level) is another variable to be considered since this is a key force underlying changes in diet and occurs at differing rates across the world [8]. Thus, to understand shifts in dietary consumption, it is mandatory to conduct a deep investigation of culture and context-specific factors.

There are a large number of Haitian immigrants across the globe. The countries with major numbers, in descending order, are the United States (U.S.) (705,000), the Dominican Republic (496,000), Chile (237,000), Brazil (143,000), Canada (101,000), and France (85,000) [9]. The Haitian diaspora has traditionally moved towards high-income countries in North America, especially the U.S. Recently, new flows have increased through middle-income countries in Latin America, such as Brazil, where the threat of food insecurity may be greater. Migration from Haiti has been driven by political, economic, and ecological factors, underscoring a multidimensional vulnerability [9]. Haiti has the Western Hemisphere's lowest gross domestic product per capita, and economic insecurity has increased over the last ten years after several natural disasters (e.g., the 2010 earthquake and Hurricane Matthew in 2016), when many Haitians died or lost their homes, and violent events have increased, including the assassination of Haiti's President, Jovenel Moïse, in 2021, worsening gang violence [9].

Haitian immigrant characteristics like being predominantly poor, black, and French Creole-speaking tend to increase their vulnerability since language barriers and racism might reduce access to work, health care, and food [9]. Haiti is still in the receding

famine period, and the Haitian migration flow includes high- and middle-income countries, resulting in different combinations of degrees of *nutrition transition* [8]; thus, the exposure to more Western-pattern diets might also be heterogeneous. Despite these Haitian migration specificities, few studies focused on diet and nutrition include Haitian immigrants in stratified samples in different contexts [10,11]. To the authors' knowledge, this is the first review addressing diet, nutrition, and health focusing on only Haitian immigrants across the globe. The research's breadth on this topic is not clear. Therefore, to scope the body of literature is the primary need and might be a precursor to further systematic review. For this primary need, the scoping review is ideal and, as it requires rigorous and transparent methods, ensures trustworthy results as compared to the narrative review [12,13]. Therefore, the goal of this scoping review was to map and describe the available evidence on dietary characteristics and diet-related health conditions among Haitian immigrants across the globe.

4. Methods

This review was based on the recommendations of the international guide Preferred Reporting Items for Systematic review and Meta-Analyses extension for Scoping Reviews (PRISMA-ScR) [12,13]. A

scoping review protocol was submitted for registration in the Center for Open Science in March 2023 (<https://doi.org/10.17605/OSF.IO/ERKGW>).

The research question was: What are the changes and retainings in the dietary characteristics among Haitian immigrants and their underlying determinants and health outcomes?

The Population, Concept, and Context (PCC) framework was used to determine the eligibility criteria. Table 1 presents the PCC, the information sources selected for searches, and the types of evidence according to inclusion and exclusion criteria.

The search strategy was built by consulting the Medical Subject Headings (MeSH) or using keywords related to the inclusion criteria (Appendix I). The search was conducted in July 2023 in this way: records retrieved from the sources were screened and pre-selected based on the titles and abstracts; publications pre-selected were screened and selected based on the full-text examination done in detail against the inclusion criteria; references to the selected reports were checked by manual search to identify relevant studies; and duplicate records were identified by software EndNote.

The data extraction process was based on a customised extraction form, including base descriptive data (e.g., author, year published, title, study design, sample, research setting, aim of study) and specific categories (e.g., diet/nutrition's measurements or tools, indicators of health conditions, acculturation's measurements, participant reports about dietary changes, barriers and facilitators of a healthy diet, and major findings related to the review objective or question). The data related to specific categories were summarised using thematic analysis. The sub-topics that emerged from independent authors's analyses were compared and clustered into major categories to present a narrative summary.

Table 1
Eligibility criteria based on PCC and search criteria.

Characteristic	Inclusion criteria	Exclusion criteria
Population	Haitian immigrants	None
Concept	Data on dietary (intake, quality, patterns, behaviour, changes, acculturation), nutrition and health transition, barriers and facilitators of a healthy diet, and diet-related health conditions	Studies without relevant information about diet measurements
Context	Countries across the globe adopted by Haitian immigrants	Studies focused on internal migration
Types of evidence	Primary research (no limits in study design) Grey literature Full-text articles, full-text dissertations, full-text thesis Reports written in English, Portuguese, French, or Spanish Any year of publication	Poster and conference abstract Article for which full text cannot be obtained Studies without stratification by Haitian ethnicity
Information sources	LILACS MEDLINE Scopus Web of Science Cochrane Embase Catalogo of Theses and Dissertations of the Coordination for the Improvement of the Higher Education Personnel (CAPES) Brazilian Digital Library of Theses and Dissertations (BDTD) Global ETD Search (via NDLTD) ProQuest Dissertation & Theses Global Open Access Theses and Dissertations (OATD) Red de Repositorios Latinoamericanos Redalyc	

The search, study inclusion, and data extraction were conducted independently by the authors, and any discrepancies in these stages were discussed between the authors until they reached a consensus.

As our goal was to provide a broad overview of the available literature, regardless of its risk of bias, we did not assess the studies' methodological quality, which is generally not recommended in scoping reviews [13].

5. Results

The flow diagram (Fig. 1) presents the selection of sources of evidence.

The majority of reports are journal articles (83,3 %), and only 16,7 % are grey literature. All except one of the reports were published in English. The research settings were: the U.S. (63,3 %), Canada (13,3 %), Chile (6,7 %), Dominican Republic (6,7 %), Cuba (3,3 %), and Brazil (3,3 %). Table 2 describes other study characteristics.

The results of individual sources of evidence related to the review objective or questions were categorised into four thematic categories: food consumption patterns and trends, food and nutrition insecurity, cultural identity, and diet-related health conditions.

5.1. Food consumption patterns and trends

Three reports identified four dietary patterns of Haitians living in Montreal for various lengths of time as a means of staging dietary transition and linked these patterns to diet quality [20,22,23]. The traditional and pre-western patterns included a large majority of subjects (83 %) and were healthier than the western-type, which included a significantly lower proportion of subjects complying with a limited

intake of total fat and cholesterol. Participants with traditional patterns were older, had lived longer in Haiti, had a lower socio-economic status, and surprisingly had more metabolic syndrome abnormalities than those with a western diet type, even after controlling for age and sex [20].

Four reports conducted by Huffman et al. in the U.S. focused on diet quality [11,27–29]. Overall, the dietary indexes used to assess dietary quality indicated that Haitian immigrants do not have a healthy diet. However, these studies suggest that Haitian immigrants had a healthier diet compared to African Americans [29] and migrants from Cuba [28] because their diet included more fruits, vegetables, nuts, soy, fish, and chicken, and less meat, beans, and solid fats, alcohols, and added sugars (SoFAAS) [28,29]. Despite this, findings revealed that Haitian immigrants were more likely to have micronutrient insufficiencies compared to the others, resulting from a lower daily energy intake [27–29]. Furthermore, dietary quality was positively associated with years in the U.S. (>15 years) and female gender, and negatively associated with speaking no English and having an income under 20,000/yr [11].

A study among Haitian immigrant farmworkers found low diversity and lower consumption of animal products compared to the typical U.S. diet but did not find remarkable changes in diet since migration or an association between the length of time in the U.S. and the degree of dietary change. However, the general feeling among participants was that their diets had deteriorated since migration [15].

5.2. Food and nutrition insecurity

Rates of food insecurity of 60.6 % and 78 %, respectively, were found in Chile [31] and Haitian-Dominican bateyes [32]. Sixty-five percent and 64.6 %, respectively, of male workers in the Dominican Republic [17] and adults in Brazil [33] were worried about running out of food

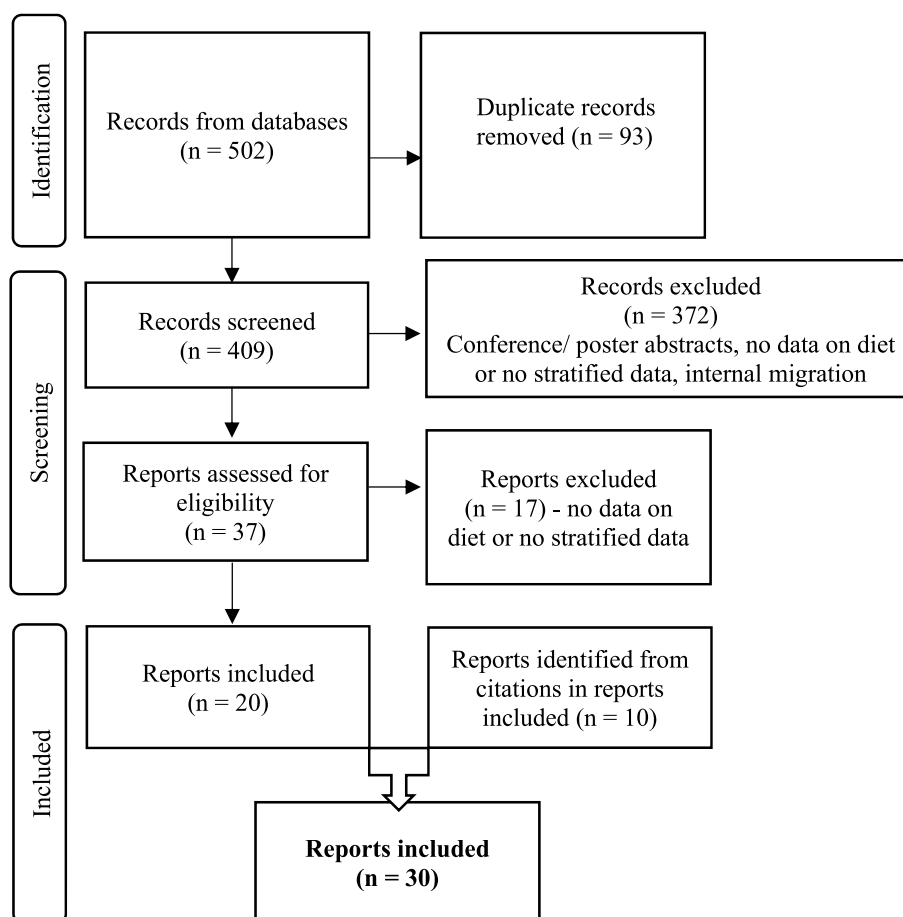


Fig. 1. PRISMA flow diagram of the eligible reports adapted [14].

Table 2
Characteristics of the included studies.

Year	First author	Study design	Study participants
1986	Bernstein [15]	ethnography/ cross-sectional	100 Haitian man immigrant farmworkers, aged (18–54)
2013	Boulos [16]	cross-sectional	393 immigrant mothers (132 Haitian, 144 Brazilian, 117 Latino), aged (20–55)
2020	Carney [17]	QI interview/ cross-sectional	Haitian male immigrant workers (60 in cross-sectional/9 in qualitative), aged (18–30)
2017	Caspi [18]	cross-sectional	797 low-income housing residents (251 American/577 immigrants: 185 Haitian, 93 Puerto Rican, 170 Latino, 98 others), aged (18–60+)
2012	Caspi [19]	cross-sectional	743 low-income housing residents (241 American/502 immigrants: 169 Haitian, 88 Puerto Rican, 163 Latino, 82 others), aged (18–60+)
2010	Delisle [20]	cross-sectional	181 Haitian immigrants
1986	DeSantis [21]	QI interview	30 Haitian mothers with children in infancy to adolescent
2007	Désilets [22]	cross-sectional	182 Haitian immigrants, aged (25–60)
2005	Désilets [23]	cross-sectional	181 Haitian immigrants, aged (25–60)
2023	Gutérrez [24]	QI interview	25 Haitian immigrants, aged (≥ 18)
2020	Haffizulla [25]	focus groups/ secondary analysis	38 Caribbean immigrants (8 Haitians, 30 Caribbeans from different islands), aged (20–48)
2014	Huffman [11]	cross-sectional	113 Haitian descents, aged (≥ 35)
2013	Huffman [26]	cross-sectional	254 adults with diabetes (129 of Haitian descent, 125 of African descent), aged (≥ 35)
2012	Huffman [27]	cross-sectional	868 adults (258 of Haitian descent, 361 of Cuban descent, 249 of African descent), aged (≥ 35)
2012	Huffman [28]	cross-sectional	868 adults (258 of Haitian descent, 361 of Cuban descent, 249 of African descent), aged (≥ 35)
2011	Huffman [29]	cross-sectional	471 adults (246 of Haitian descent, 225 of African descent), aged (≥ 35)
2005	Marquis [30]	cross-sectional	209 Immigrants mothers (68 Haitians, 75 Portuguese, 66 Vietnamese), children aged (10–12)
2019	Maury-Sintjago [31]	cross-sectional	234 Haitian immigrants
2019	McWade [32]	cross-sectional	667 adult heads of households from Haitian-Dominican bateyes, aged (18–65+)
2023	Muraro [33]	cross-sectional	452 Haitian immigrants, aged (≥ 18)
2022	Rodríguez-Fernández [34]	cross-sectional	173 Haitian immigrant mothers
2008	Schooler [35]	QI/Qn interviews	34 Haitian descent mothers, aged (≥ 18)
1992	Stowers [36]	development of a food guide	pregnant woman immigrants (Haitian, other Caribbeans)
1995	Thomas [37]	QI interview	60 immigrant mothers (30 Haitian, 30 Cuban) with children in infancy to adolescent
2015	Tovar [38]	cross-sectional	313 immigrant mother-child dyads (92 Haitians, 125 Brazilians, 96 Latinos), aged (mother: 20–55, child: 3–12)
2014	Tovar [39]	cross-sectional	383 immigrant mothers (131 Haitians, 138 Brazilians, 114 Latinas), aged (20–55)
2013	Tovar [40]	cross-sectional	387 immigrant mother-child dyads (134 Haitians, 139

Table 2 (continued)

Year	First author	Study design	Study participants
			Brazilians, 114 Latinas), aged (mother: 20–55, child: 3–12)
2013	Tovar [10]	focus groups	25 immigrant mothers (11 Haitians, 3 Brazilians, 11 Latinas), aged (20–55)
2012	Tovar [41]	cross-sectional	383 immigrant mother-child dyads (131 Haitians, 138 Brazilians, 114 Latinas), aged (mother: 20–55, child: 3–12)
2009	Volpato [42]	case study	24 Haitian immigrants (15 women, 9 men), aged (60–120)

Abbreviations: QI: qualitative. Qn: quantitative.

before having money to buy more food. Whereas, among these worried immigrants, almost 52 % and 62.6 %, respectively, of the immigrants living in the Dominican Republic and Brazil actually ran out of food. Low dietary diversity levels were found in Haitian-Dominican bateyes (57 %) [32] and among workers in the Dominican Republic (77 %) [17]. The factors positively associated with food insecurity were: having children, limited Spanish proficiency, no access to basic services, and not being a legal permanent resident [31]; being women, having a debt to migrate and having lived in the country for more than a year [33]; lack of utilities to cook or keep perishable items, racial prejudice, social isolation, and precarious life conditions [17]; being below the poverty line, not living in a rural area, not receiving gifts and/or donations, and not having a salaried job [32]. While those associated with dietary diversity were: living in a semi-urban area, living with a partner, growing at least some food, and receiving gifts and/or donations [32].

An American study found that Haitian immigrants who reported food hardship were more likely to be obese than those not reporting hardship [18].

5.3. Cultural identity

Gutiérrez [24] determined the sociocultural implications of a Haitian restaurant in Mexico for Haitian immigrants. Findings revealed that the majority of participants prefer Haitian food and have a strong cultural connection to traditional Haitian food. However, due to the socioeconomic difficulties, some participants considered food as simply nourishment and valued the restaurant mainly because it provides informal community resources about aid, housing, and employment.

The strong Haitian cultural identity was also evidenced by a study focused on Haiti's ethnobotanical practices in Cuba [42].

5.4. Diet-related health conditions

The prevalence of obesity in adults was 43 % [18], but in women it was higher (50 %) [39]. The mean waist circumference was found below and above the cut-off point for abdominal obesity, respectively, for men (≤ 102 cm) and for women (≤ 88 cm) [11]. The metabolic syndrome was found in 8–13 % of subjects [23]. The metabolic syndrome was found in 8–13 % of subjects [23]. One study investigated blood pressure levels among farmworkers and did not find hypertension [15].

Six reports focused on obesity among recent immigrant mothers [10, 16, 38–41]. A higher percentage of Haitians were obese (50.0 %) [16, 39] compared to Latinas (39 %) and Brazilians (25 %), despite Haitians reporting eating the fewest number of calories, total fat, and added sugar compared to the others [16]. The majority of factors related to overweight and obesity were: a high degree of self-reported changes in diet and physical activity since immigrating to the U.S. [39]; the increase in the consumption of fast and prepared food due to the lack of time for preparation and the increased availability of inexpensive fast food [10]; the influence of maternal feeding styles on the children's consumption [38, 40, 41]; the reduced frequency of evening family meals [40]; and

socio-demographic factors (Haitians were the most likely to be unemployed and to have lower incomes, despite having completed the most schooling compared with the others) [16,39].

Four studies investigated breastfeeding and weaning practices among Haitian immigrant mothers [21,34,35,37]. In Chile, the prevalence of exclusive breastfeeding (EBF) for infants under 6 months was 54.3 %, and 72.8 % of the participants had adequate knowledge of nutrition [34]. Employment, access to basic services, and Spanish proficiency had a positive association with EBF, while not having permanent residency, residency <12 months, limited knowledge of breastfeeding, and low educational attainment had a negative association [34]. In the U.S., two reports [21,37] mentioned that the majority of mothers (73 %) believe that breastfeeding is better than bottle feeding, and 60 % elect to breastfeed one or more of their infants. However, when statistics were compared for the 60 infants born in Haiti and the 22 born in the U.S., it was noted that only one woman chose to breastfeed her U.S.-born infant [21]. The primary reason for not electing breastfeeding given by mothers was their need for employment and lack of support [21,37]. Schooler [35] found that traditional foods, such as rice and beans, were prevalent in infant feeding; however, other Haitian starches, such as yams and yuca, were partially replaced by American starches like potatoes and cereals, which are less expensive. Another study found that health motivation emerged as the only significant predictor of the importance given to family meals among Haitian mothers, suggesting that Haitian mothers value health [30].

Two studies focused on health promotion revealed a lack of culturally appropriate foods in food guides and presented the most suitable versions [25,36]. Another study found that Haitian immigrants with diabetes use food groups in planning meals, but without a positive effect on glycemic control [26].

6. Discussion

This review determined the scope and extent to which diet, nutrition, and diet-related health conditions among Haitian immigrants have been researched. We identified research gaps that require further investigation in: research settings (Brazil, Chile, and the Caribbean); adolescents and the elderly; and diet-related chronic diseases except obesity. The thematic construction allowed us to determine and describe the available evidence related to our aim and question, identifying other research gaps and highlighting the main findings: preference for healthy and traditional eating patterns; some degree of dietary change towards less healthy eating; poor diet quality and inadequate micronutrient intake; experiences of food insecurity; high prevalence of obesity, especially among women; high adherence of mothers to breastfeeding, reducing after migration; and the need for culturally appropriate food guides. These results are discussed below.

As the research setting was concentrated in the U.S. and Canada, the majority of the evidence underrepresents the context in Latin America and the Caribbean. Brazil, for instance, experienced nutrition transition in a different way than the U.S. and Canada [8]. Besides this, hunger and poverty in Brazil have been accentuated recently, which could exacerbate the threat of food insecurity among Haitian immigrants [33].

Adolescents and the elderly experience acculturation and changes in diet differently; while the first tend to rapidly adopt new-westernised foods, the elders tend to maintain traditional diets [30,43]. This trend among elders was also observed in one study published in two reports included in this review [22,23]. However, none of the studies focused on adolescents, and more studies are needed focused on the elderly, clarifying this trend.

This review provides little evidence on diet-related chronic diseases, except obesity. The *healthy immigrant effect* concept is well documented in previous studies (2, 7). Nevertheless, the study that investigated this concept did not confirm the *healthy immigrant effect* since the author did not find an association between the deterioration of risk markers and a longer time in Canada [23]. Research is needed to determine evidence

on this concept among Haitian immigrants and its relation to dietary acculturation.

This review suggests that Haitian immigrants have a preference for healthy and traditional eating patterns. However, available evidence among mothers suggests that socioeconomic issues make maintaining regular and healthy household routines difficult, despite the fact that they consider healthy foods important. In the same way, Berggren-Clausen [44] reports that immigrants value fresh, healthy, and traditional foods but face socioeconomic barriers.

The evidence reviewed suggests some degree of dietary change towards less healthy eating. Emerging dietary patterns in Canada [20,22,23] indicated that dietary acculturation tends to lead to less healthy eating since the participants who tend to retain their traditional eating had lived longer in Haiti. However, other evidence reviewed did not confirm the association between acculturation and dietary acculturation. In contrast to previous studies that reported negative effects on the diet and health of immigrants associated with the length of residence in the host country and fluency in the host language [4–6], some studies in this review did not find clear associations in this direction. Bernstein [15] reported that the length of time in the U.S. appeared to have little effect on the degree of dietary change. Huffman [11] found that more time in the U.S. and speaking English improved the diet quality, likely enhancing immigrants' economic conditions. This conflicting evidence corroborates authors who argue that there is no consistent direction of effect between the level of acculturation and dietary intake, and the exclusive reliance on these acculturation proxy items may affect the reliability of research since dietary acculturation is a multidimensional, dynamic, and complex phenomenon [2,7]. Studies based on a more comprehensive model are needed to better understand dietary acculturation.

Evidence reviewed pointed out that Haitian immigrants have poor diet quality and inadequate micronutrient intake. However, their dietary patterns seem healthier compared to more Westernised patterns and those of other ethnic subgroups.

Our review determined and described evidence on the experience of food insecurity among Haitian immigrants in Brazil, Chile, and the Dominican Republic. Further research is needed in other research settings. Given that the existing research on food insecurity among immigrants has been largely conducted in U.S. [45], this evidence contributes to the knowledge of the field. In addition, our results highlight that the barriers to accessing adequate food and nutrition are in large part related to poverty, unemployment, and a lack of social support. Among workers in the Dominican Republic, there is an intersection of poverty, racialized violence and stigma, and food insecurity that lead to low-nutrition street foods. Further research is needed to determine the extent to which intersections of inequalities impact food security.

We determined available evidence on obesity mainly among women, whose obesity rate overcame the other ethnic subgroups. Similar findings were found by Paixão [46], who estimated a lower prevalence of obesity in Brazilian immigrants (25.4 %) compared to Haitians (43 %). Further research is needed focused on other genders and age groups. This review allowed us to note that factors associated with obesity are largely linked to socioeconomic difficulties and a lack of support; however, the cultural influences need to be more fully characterised.

This review suggests that Haitian mothers have adherence to breastfeeding since the rates found are higher than those reported at the global level in 2015–2021 (48 %) [WHO] [47]. Furthermore, our findings fall in line with evidence that immigrant women were more likely than non-immigrants to initiate breastfeeding [48]. However, evidence suggests that adherence is reduced due to socioeconomic barriers.

In this review, we located evidence of culturally inappropriate food guides, corroborating previous research [1,2] that highlights the importance of sensitive materials to ensure the immigrant's unique cultural needs.

There is a lack of evidence concerning how immigrants cope with barriers to accessing adequate food. However, there is evidence that

spaces of commensality that are culturally appropriate may support immigrants in overcoming socioeconomic challenges and preserving cultural identity.

6.1. Limitations

Single-item measures of acculturation were used in the studies, which are limited determinants of dietary acculturation. The majority were cross-sectional, which can neither discern the direction of influence nor look at change over time. Longitudinal research is needed to determine the directionality and temporality. As few studies were qualitative, there was a lack of information about the behaviour, attitude, feelings, and perceptions. A risk of bias assessment of the included evidence was not undertaken; therefore, this review does not provide definitive conclusions for practice.

7. Conclusion

There is available evidence that Haitian immigrants experience food insecurity and that its underlying determinants are mainly related to a situation of social vulnerability.

Research on this topic is scarce. Thus, more research is required to understand the mechanisms through which diet may change and may influence immigrants' health. We recommend longitudinal studies to discern temporality and directionality, in-depth qualitative research to better understand context-specific factors, and field action reports describing local and global strategies to manage Haitian migration-related food and nutrition issues. Further research is needed in Latin America and the Caribbean, in understudied populations such as adolescents and the elderly, and in understudied themes such as diet-related

chronic diseases. Finally, dietetic practitioners should implement culturally sensitive approaches to promote nutritional education, and policymakers should design programmes and policies focused on protecting and supporting the most vulnerable Haitian immigrants, who do not have their fundamental right to adequate food guaranteed.

Ethical approval

This is not applicable because it does not include human or animal participants.

Funding

The authors thank the Programa de Pós-graduação em Saúde Coletiva - UNICAMP for the support to cover publication costs.

Competing interests

The author(s) declare that there is no potential conflict of interest.

Authorship

Conception, design, and write-up (LSP). Data collection, analysis, revision, approval (all authors).

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.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.puhip.2024.100520>.

Appendix I. Search strategies according to databases

Database (fields)	Search Strategy
BDTD ¹ (all fields), Catálogo de Teses e Dissertações da CAPES ² (basic search)	(Haiti OR hatiano OR haitianos OR haitiana OR haitianas) AND (Imigrante OR Imigrantes OR "Migração humana" OR refugiado OR refugiados OR diáspora OR diásporas) AND (Dieta OR Nutrição OR Alimentação OR Nutricional OR Alimentos OR Alimentar)
LILACS ³ (title, abstract, subject), MEDLINE ⁴ – BVS (title, abstract, subject)	(Haiti OR Hatian*) AND ("Emigrantes e Imigrantes" OR "Migração humana" OR refugiados OR diáspora) AND ("Dieta" OR "Alimentos" OR "Alimentos, Dieta e Nutrição" OR "Ingestão de Alimentos" OR "Comportamento alimentar" OR "Preferências Alimentares" OR "Inquéritos Nutricionais" OR "Avaliação Nutricional")
MEDLINE – PubMed ⁵ (title, abstract, subject)	(Haiti OR Haitian*) AND ("Human Migration" OR "Emigrants and Immigrants" OR refugees OR diaspora) AND ("diet" OR "food" OR "Diet, Food and Nutrition" OR "eating" OR "Feeding Behavior" OR "Nutrition Surveys" OR "Food Preferences" OR "Nutrition Assessment")
Cochrane ⁶ (title, abstract, subject), Embase ⁷ (basic search), NDLTD ⁸ (basic search), OATD ⁹ (basic search), ProQuest Dissertations & Theses Global ¹⁰ (Anywhere except full text), Repositorio Latinoamericano ¹¹ (basic search), Redalyc ¹² (basic search), Scopus ¹³ (article title, abstract, Keywords), Web of Science ¹⁴ (core collection/All fields)	(Haiti OR Haitian OR Haitians) AND (Immigrant OR immigrants OR "Human migration" OR refugee OR refugees OR diaspora OR diásporas) AND (Diet OR Dietary OR Food OR Feeding OR Nutrition OR Eating)

¹ <https://bdt.d.ibict.br/vufind/>.

² <https://catalogodeteses.capes.gov.br/catalogo-teses/#/>

³ <https://lilacs.bvsalud.org/>.

⁴ <https://bvsalud.org/>.

⁵ <https://pubmed.ncbi.nlm.nih.ez88.periodicos.capes.gov.br/>.

⁶ <https://www.cochranelibrary.com/advanced-search?cookiesEnabled>.

⁷ <https://www-embase.ez88.periodicos.capes.gov.br/search/quick>.

⁸ <https://ndltd.org/>.

⁹ <https://oatd.org/>.

¹⁰ <https://www.proquest.com/pqdtglobal>.

¹¹ <https://repositorioslatinoamericanos.uchile.cl/>.

¹² <https://www.redalyc.org/>.

¹³ <https://www.scopus.ez88.periodicos.capes.gov.br/search/form.uri?display=basic#basic>.

¹⁴ <https://www-webofscience.ez88.periodicos.capes.gov.br/wos/woscc/basic-search>.

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