

HEALTH LITERACY IN NUTRITION AND THE PROMOTION OF HEALTH COMMUNICATION: A SCIENTIOMETRIC STUDY

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Abstract: Health Literacy (HL) is associated with the acquisition of knowledge, motivation and skills to access, understand, evaluate and apply health information to make choices and decisions about daily health care, disease prevention and health promotion to maintain or improve quality of life. From this perspective, Nutritional Literacy (NL) and Food Literacy (FL) emerge. The objective of this study is to analyze the scientific production through a scientometric study on Health Literacy in Nutrition and the production of Health Communication in this field; and to describe the production on Health Literacy in Nutrition and the Production of Health Communication. This study is of the qualitative and quantitative type developed through a Literature Review and Scientometric study in which articles on the theme of Health Literacy and Health Communication were researched from January 2012 to December 2022 in Clarivate's Web of Science (WoS). We found 367 references that dealt with Health Literacy and Health Communication, and out of a total of 22 articles, 10 that dealt specifically with the approach to Nutrition and Food were selected. Therefore, the insertion of LN and LA can constitute strategies with potential for effectiveness in health promotion and prevention, when linked to health communication processes. It is necessary to plan new studies in the Brazilian population to analyze the benefits to public health.

Keywords: Health Literacy, Social Media, Behavioral Nutrition, Health Communication

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INTRODUCTION

Literacy (HL) is associated with the acquisition of knowledge, motivation and skills to access, understand, evaluate and apply health information to make choices and make decisions about everyday health care, disease prevention and promotion of health to maintain or improve quality of life, according to the World Health Organization (WHO, 2013).

A HL considered inadequate or “limited” is associated with greater chances of worsening long-term health conditions, decreased health prevention practices, less independence in medication management and increased mortality (TAYLOR et al., 2018) .

Adequate HL enhances the communication processes between patients and healthcare professionals, the active and autonomous search for health information to improve understanding and positively impact clinical results, contributing to (TAYLOR et al., 2018).

Table 1 presents the “ European Health Literacy Survey ”: with the 12 subdimensions defined by the European Health Literacy conceptual model. This structure was based on the combination of the four dimensions relating to health information processing with the three levels of domains, generating a matrix with 12 dimensions of the LS (SØRENSEN et al, 2013).

From this perspective, it is essential to highlight that the complexity of the HL concept and the multidimensionality of meanings that can be attributed in the diagnostic assessment of the patient’s or health professional’s level of literacy and the possibilities of interventions that can be carried out in different actions in health as: health care, disease prevention and health promotion (SØRENSEN et al, 2013).

Within the scope of the Unified Health System (SUS), LS can be understood and constituted when historically linked to the process of fighting for the democratization of access to information and communication practices that began to be debated with broad popular participation and the institutionalization of Health Councils by law no. 8142/90 (TEXEIRA, 1997).



With the participation of Brazilian society and proposals for articulation in the area of information, communication and education, the first attempts were made to build a project on “Information in health and population” in health by professionals in the areas of communication and education (TEXEIRA, 1997). From this perspective, the dissemination of information should not be restricted to the mere dissemination of data, but promote training in the use of this data and encourage dialogical communication practices that allow the decoding of technical rhetoric into popular rhetoric to build a “Health Awareness” (TEXEIRA, 1997).

When reflecting on the field of “Communication and Health”, according to a Bourdinean conception , it is a space constituted by human relationships established historically and cumulatively through social contexts and processes that are inserted and influenced by positions and symbolic material capital. This field includes theories, methods, institutional policies and practices, interests, tensions and negotiations (ARAÚJO; CARDOSO; MURTINHO, 2011).

Furthermore, the field of communication is not just about reflecting on issues related to media and ideology, but must encompass social processes that occur in this dynamic of communication that are influenced by the field of ‘cultural battle’ (MARTÍN-BARBERO , 2015, p.16). The relationships between actors in the communication process are not static, but there is a field of disputes and tensions between individuals.

Currently, in the field of Nutrition and Food, there has been reflection on the importance of health information and communication processes as a possibility for disseminating knowledge and changing eating habits to improve the health conditions and quality of life of the population. From the LS perspective, the concept of Nutritional Literacy and Food Literacy emerges as possibilities for health information and communication strategies and as an emerging field of knowledge that is proposed as a differentiator in health promotion and disease prevention.

Nutritional Literacy (LN), which seeks as its main objective to evaluate the basic literacy and numeracy skills necessary to acquire , process and interpret nutritional information, that is, it only develops an understanding of information exclusively related to nutrients, but is not concerned with



other topics about food (TORRES; REAL, 2020).

Food Literacy (LA) is a concept used to formulate food and nutrition policies and field research, and considers the involvement of all individuals in the food system, nutritional and food information, the ability to apply this information and skills for preparing foods, healthy food choices and consider the impact of these components on health, economy and the environment (TORRES; REAL, 2020).

There are few studies that relate Health Literacy to the processes of Health Communication in the field of Nutrition and questions that can be asked about ‘How is the scientific production on Health Literacy in Nutrition and the Promotion of Health Communication characterized? What are the main gaps in studies on Health Literacy in Nutrition and the Promotion of Communication in Health?’.

In this sense, the objective of this study is to analyze scientific production through a scientometric study on Health Literacy in Nutrition and the production of Health Communication in this field; and describe the production on Health Literacy in Nutrition and the Production of Health Communication.

MATERIALS AND METHODS

This study is qualitative and quantitative, developed through a Bibliographic Review and Scientometrics study in which articles were researched on the topic of Health Literacy , Health Communication from January 2012 to December 2022 Web of Science (WoS) from Clarivate . The English language descriptors “Health Literacy ” AND “Health Communication” were used. In the search for knowledge produced in the field of Health Literacy , Health Communication and Nutrition, only results for the search criteria and the present theme were presented with the terms “Health Literacy ” AND “Health Communication” AND “ Nutrition ” in the summary table.

The following variables were considered for this study: year of publication, source, impact



factor, area of knowledge, citation and country were identified for each publication. The results were analyzed using the WoS database and Microsoft Office Excel and Citespace software to create the figures.

Scientometric analysis, CiteSpace was used, a software that enables data analysis and scientific visualization used for processing information related to databases that enables co-citation and was developed by Chaomei Chen (2006). With several functions that enable the creation of network profile graphs to improve the level of interpretation for the production of scientometrics studies.

This way, it is possible to determine which thematic areas are most comprehensive, identify hot posts and label clusters related to the terms searched. It is possible to establish which main research studies have been carried out, the most frequent terms and/or key words in journals.

Therefore, the node analysis can be represented by groups of tree rings in different colors, in which it can be inferred that the purple color indicates the oldest study and the orange color the most recent study. With the use of CiteSpace, it is possible to identify central points and nodes with high betweenness centrality. Centrality analysis was carried out according to the variables: author, keyword, countries using the following Equation(1):

$$\text{Centrality (Nodal } i) = \sum_{i \neq j \neq k} P_{ik} (i) / P_{ik}$$

According to Eq.(1), quantitative analysis can be performed based on the number of paths between the nearest nodes j and k and the numbers of paths that pass through node i . Therefore, using the centrality indicator, it is possible to visualize, through this spatial component indicator, how scientific production is distributed and the main trends through spatial scale information.

RESULTS

367 references were found that dealt with Health Literacy and Health Communication



and from a total of 22 articles, 10 were selected that dealt with the approach to Nutrition and Food specifically.

In table 1, the Top 10 authors cited according to the analysis in Web of Science are presented, with an h-index of 25, the authors Fleary , Joseph; Pappagianopoulos , in the United States, obtained the highest number of citations in 2018 (n=150) reaching the annual evaluation of 25 and this publication was carried out in the Journal of Adolescence .

Table 1. Top 10 most cited authors, also obtained from Create Citation Report from Web of Science.

Authors	Periodical	Year of publication	Total Citations	Annual Assessment
FLEARY; JOSEPH; PAPPAGIANOPOULOS	Journal of Adolescence	2018	150	25
CHEN, X. et al.	Journal of Health Communication	2018	101	16.83
NUTBEAM, D.; LLOYD, J.E.	Annual Review of Public Health	2021	100	33.33
LI, X.; LIU, Q.	Journal of Medical Internet Research	2020	85	21.25
BAUMANN E., et al	Journal of Medical Internet Research	2017	71	10.14
DADACZYNSKI K., et al.	Journal of Medical Internet Research	2020	68	22.67
JOSEPH G., et al.	Journal of Genetics Counseling	2019	68	9.71
RATZAN SC, et al.	Public Health Research & Practice	2018	66	16.5
MEPPELINK, CS, et al.	Journal of Health Communication	2020	55	11
HAN, PKJ; et al.	Journal of Health Communication	2018	50	8.33

SOURCE: (Web of Science, 2022)

In this study, a systematic review was carried out on the relationship between HL and health behaviors in adolescents to investigate the characteristics of different levels of HL and their role in decision-making about adolescent health. The results demonstrated that there is a significant



relationship between HL and health behaviors and health outcomes and emphasized the need for future research to utilize an integration between theoretical frameworks of health behaviors and the use of comprehensive LS definitions and strategies (FLEARY; JOSEPH ; PAPPAGIANOPOULOS, 2018).

In the second study, Chen et al (2018), in the United States, were cited 101 times, reaching an annual rating of 16.83 and the article was published in the Journal of Health Communication . In this study, LS was analyzed and associated with people’s trust in various potential sources of health information. They found that lower level of LS was associated with lower odds of choosing medical websites for health information and higher odds of using other media such as television, social media, blogs and celebrity pages. In this study, the authors recommended the need to increase the public’s ability to evaluate the quality of health information sources and highlight the need to improve the reach of high-quality health information among people with limited HL in order to increase effectiveness. of health communication programs and campaigns (CHEN et al, 2018).

The third study, by authors Nutbeam and Lloyd (2021), in Australia, was cited 100 times and reaching an annual rating of 33.33 and the article was published in the journal Annual Review of Public Health. The study sought to portray the social determinants of health and disparities and inequalities in health status across population groups.

These authors highlighted the conceptual differences regarding health inequalities, for example, in the United States the term “health disparity” is used to refer to the worst state of health between different social, racial and ethnic groups. On the other hand, in other countries the terms used such as “health inequalities” and “health inequity” are used to describe differences in health conditions highlighting the importance of equity and social justice. They highlighted the potential role of HL as a social determinant of health and as a possible public health intervention for health inequities (NUTBEAM; LLOYD, 2021).

In this way, LS would contribute to mediating the causes and effects of social problems established by health determinants. With existing interventions, it was possible to demonstrate the



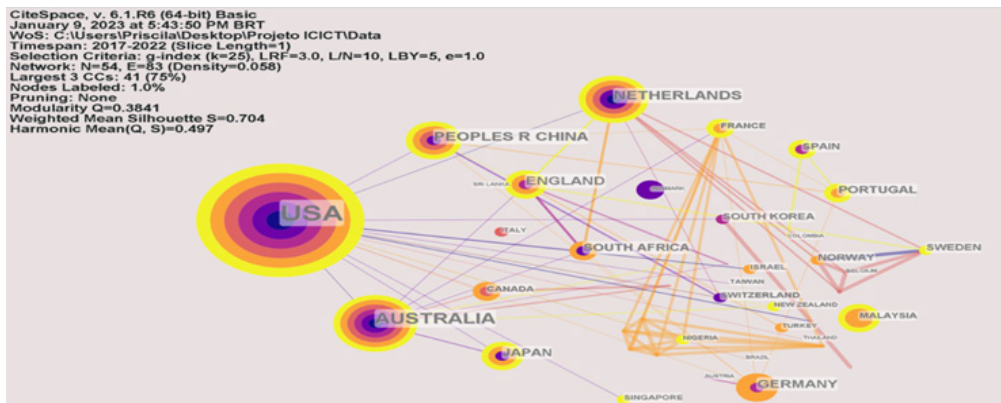
feasibility of improving LS in high-risk populations and the need for research that tests the effects of health inequalities on LS. The authors pointed to themes about HL that should be developed: (1) improving the quality of health communication that reaches a diversity of populations, especially improving front-line professional skills and support; (2) enabling people to develop transferable skills in accessing, understanding, analyzing, and applying health information; and (3) ensure that priority is proportionate to need, reaching and engaging population groups that are disproportionately affected by low LS (NUTBEAM; LLOYD, 2021).

The production of publications by countries carried out by spatial analysis in which countries with larger circles and more orange colors have more recent publications with a total of 54 nodes in the network, according to the g-Index index ($k=25$), modularity ($Q= 0.497$), cluster ($S=0.704$) and Harmonic Mean ($Q,S =0.497$). According to degree of centrality (d), countries such as the United States ($d=17$), Australia ($d=10$), France ($d=10$), Ireland ($d=8$) and England ($d=7$) have higher numbers of publications with more effects on the network, more recent publications and greater degree of centrality related to the topic (Figure 1). The countries with the most cited articles were: the United States with 177, Australia with 31, China with 16, Ireland with 15 and England with 13.

The network consisted of 4 clusters: 0# cross-sectional study, health literacy and disparities; 1#health communication, in European countries and validation study; 2# health communication, revisiting COVID-19 and health literacy ; #3 and cross-sectional and meta-analysis study. No “burst” of publications were found in the years analyzed, which refers to an ‘explosion’ of citations in one year. The centrality value was zero.



Figure 1. Geolocation of published scientific articles and grouping by countries in relation to the frequency and centrality of the theme Health Literacy and Health Communication



SOURCE: (CiteSpace , 2022)

According to figure 2, the network of key terms in the publications found on Health Literacy and Health Communication, considering the g-index (k=25) presented 253 terms with a density (d)=0.415, modularity (Q =0.3641) and cluster (S=0.7054) and Harmonic mean (Q,S=0.4973). The largest cluster #0 was about ‘Randomized Clinical Trial’ and the most cited terms were: 158 terms ‘ health literacy ‘ , 113 terms ‘ health communication’ and 48 terms ‘ care ‘ . The second largest cluster #1 was ‘ Health Literacy in Genetics ‘ and the most cited terms were: 40 terms ‘ information ‘ , 28 terms ‘ health communication ‘ and 9 terms ‘ breast cancer ‘ . The third largest cluster #2 was about ‘ Information Overload ‘ and the most cited terms were: 20 terms ‘ internet ‘ , 15 terms ‘ perception ‘ and 12 terms about ‘social media’ . The bursts found refer to cluster 7#, air pollution, with a score of 2.26 on LS in the COVID-19 scenario in 2020; and cluster 8#, ‘ the course ‘ score 2.26 on a qualitative study that portrayed the immigrant’s perception of health guidelines in Sweden, in 2020.



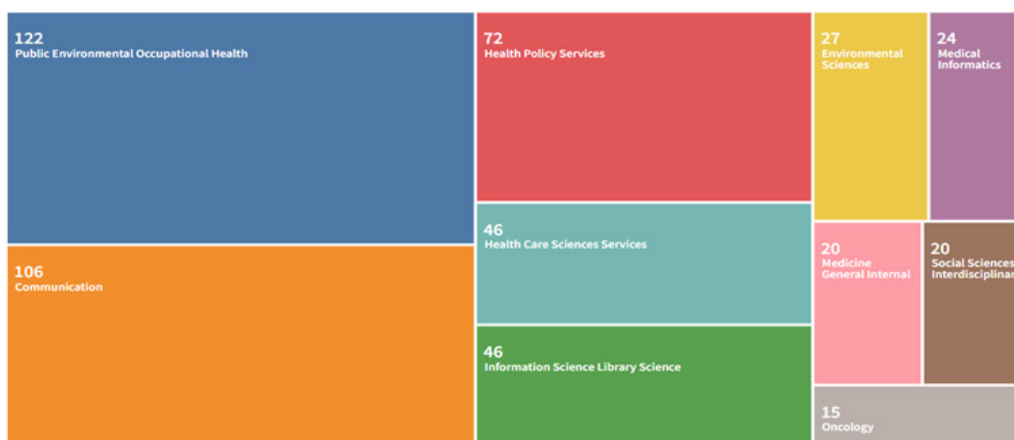
Figure 2. Network of key terms in publications on Health Literacy and Health Communication



SOURCE: (CiteSpace , 2022)

In figure 3, the distribution of publications on Health Literacy and Health Communication by area of knowledge in the period from 2017 to 2022 shows that the three areas with the highest number of publications were: 122 articles were published in the area of Environmental and Occupational Public Health , 106 articles in the area of Communication and 72 articles in the area of Health Policies and Services.

Figure 3. Distribution of Publications on Health Literacy and Health Communication by area of knowledge in the period from 2017 to 2022



SOURCE: (Web of Science, 2022)



Table 1. Studies that associated Health Literacy, Communication and Health and Nutrition

Author	Year	Quotes	Annual Assessment	Goals	Outcome
H U N T E R - A D A M S ; R O T H E R	2017	37	5.29	Explore the complexity of health and communication from the perspective of cross-border migrants seeking prenatal care in Cape Town, South Africa in a study of maternal and infant nutrition.	Communication and Health was considered the prerequisite for quality care and reducing border barriers and xenophobia. Free professional medical interpretation for the patient would not only benefit immigrant populations, but would benefit the broader community where LS language are barriers to accessing healthcare.
U E M U R A ; O K A M O T O	2021	7	1.75	To examine the effects of an active learning program on LS, lifestyle behaviors, physical function, and mental health among community-dwelling older adults with low LS.	Active learning can be used to educate not only in schools, but in healthcare, and programs can be used to promote a healthy lifestyle (i.e., physical activity, dietary variety, mobility in living space, and social network size) among older adults who lack the confidence or motivation to engage in healthy communication and behaviors.
B I S S E L L et al.	2019	6	1.2	socioecological perspective in determining the effectiveness of a longitudinal LS program/health intervention on children's nutritional knowledge, attitudes toward healthy eating and exercise, food preferences, and eating behavior	socioecological model perspective, the results suggest that children's eating behaviors need to be considered at the intersection of children's HL/health attitudes, community efforts, and media use/screen time.
R I E S M E Y E R ; H A U S W A L D ; M E R G E N	2019	5	1	Analyze the relationship between media and LS, self-representation and nutritional behavior of girls who receive nutrition-related content on Instagram	The results show the relevance of the media and LS for nutritional behavior. However, these images inspire them for their self-representation and nutritional behavior. Young people adopted the images into their own eating habits, adopting trends and thus acting against their knowledge of the negative consequences to achieve the socially expected body image.



ROBINSON; COVELESKI	2018	5	0.83	To evaluate reactions through messages from LS, feminist identification, body college-aged women related to the email dissatisfaction and body size discrepancy received from the University inviting them influenced evaluations of the offensiveness to a free program for physical fitness and and effectiveness of the message and nutritional intervention against obesity. adherence to the weight loss program.
JO; JUNG	2019	3	0.6	Investigate the use of food labels among Koreans and the demographic differences use of food labeling. Educational level is a between food label users and non-users, typical socioeconomic index, and if people presenting key data for strategies to improve who are less educated tend not to use food dietary lifestyles by facilitating the use of labeling; this can lead to health inequality. food labeling
DE ROSSO et al.	2022	two	1	Explore parents' perceptions, search for Parents receive information from multiple practical information and needs regarding sources, which can lead to confusion when infant and young child feeding to design an deciding which advice to follow. In public efficient communication strategy. health communication, the strategy adapted to the current needs of parents should target these various sources.



CHOI; NORTHUP; REID	2021	two	0.67	To determine how two individual factors, health consciousness and LS, differentially influence evaluations of claimed nutrient content messages for an unhealthy food and whether such evaluations are moderated by reading the food's nutrition facts label displaying different portion sizes.	The results reveal understanding of the processing of unhealthy food information with nutrient claims and suggest implications for health communication about food, marketing and public health policy.
HASSIM et al.	2021	1	0.33	Analyze parents' perceptions regarding health communication, how parents ensure their children follow healthy eating habits, and how they seek information about childhood obesity intervention during the COVID-19 pandemic.	The T20 groups were more efficient in managing and applying knowledge due to their greater LS and communication within their social groups making healthy food choices compared to other groups. This describes the gap in effective communication strategies to improve the public's health literacy.
PILGRIM, K.; BOHNET-JOSCHKO	2022	1	0.33	To describe an overview of the language of German fitness influencers on Instagram and the body image portrayed for implications for policies and institutions for health promotion and prevention.	The need for construction at a political level of uniform guidelines or adaptation to existing laws, so that users and influencers have a clear attribution on the labeling of contributions and, in this way, an increase in information transparency is possible in digital media.



In Table 1, the results of 10 studies that associated Health Communication, Health Literacy and Nutrition were presented in relation to the year of publication, number of citations, annual evaluation and objectives and the outcome.

The contribution of the health professional is essential to improve health communication to reduce language barriers, in the case of immigrant care, which may not be effective in reducing deeply rooted xenophobic attitudes. In interpreting language about maternal and child nutrition, the authors highlighted that confidence in the interpretation must be shared on both the part of the migrant patient and the health care provider. Health professional training and health policies must include the health communication agenda to resolve issues of cultural differences among immigrants in maternal and child nutrition. (HUNTER-ADAMS; ROTHER, 2017).

In the study in which patients participated in a 24-week active learning program (90 min on 1 day/week) in which the teaching themes were: exercise, diet/nutrition and cognitive activity to promote the health of the elderly, changes were observed behavioral behaviors in daily life and self-management according to the individual's health status with the promotion of a healthy lifestyle and preventing functional decline among older people who do not have the confidence to engage in health communication. (UEMURA; YAMADA; OKAMOTO, 2021).

In the approach to general and childhood obesity carried out in the United States, it was observed that information about the importance of adhering to healthier eating habits, reducing the consumption of foods with low nutritional content to increase LS at school, can enhance changes in food choices in different environmental contexts such as at home or in other contexts and positive changes in health behaviors (BISSELL et al, 2019).

In the context of social networks such as Instagram , in a qualitative study carried out with female adolescents aged between 13 and 19 years old, which sought to analyze the use of this platform and its potential influence on nutritional behavior and personality expression in interaction with other users in relation to Media Literacy . The authors highlighted that the transfer of Media Literacy to the field of Health Communication allows these associations to be inferred through more evident



intersections (RIESMEYER; HAUSWALD; MERGEN, 2019).

In the context of obesity in the female college population, public health strategies must consider the importance of health communication to avoid embarrassment or feelings of bullying or fatphobia when you have a low LS. The authors highlighted that in a free university program to improve physical conditioning and nutritional support, young women who had low HL considered the email approach as an institutional offense and reacted negatively, having identification characteristics such as feminist, body dissatisfaction and body size discrepancy. and assessed the effectiveness of the message as offensive and the intervention to promote weight loss was not effective (ROBINSON; COVELESKI, 2018).

In the LN approach, a study considered that the positive association between the level of education and LS may reflect on social inequity in health. The authors identified that food labels that are difficult to understand make food use and choices difficult and recommend the creation of community educational programs and measures to increase the level of LN education for interpreting food labels (JO; JUNG, 2019).

The authors De Rosso et al (2022) carried out a study on the use of different guidelines on infant feeding by French parents in which the different perceptions of parents on the information-seeking practices and feeding needs of babies and young children were assessed. Therefore, they found that the use of different sources can confuse counseling, a similarity in search strategies according to the child's age. They recommended that the content must be adequate to avoid inequalities in LS and socioeconomic status, the importance of developing different communication strategies for the use of infant feeding guidelines, creation of an official website and adequately indexed in digital and automated tools, such as use of applications on smartphones , which contributed to the construction of a new communication strategy in French public health regarding child nutrition from 0 to 3 years old.

In another study, the population segment that seeks to determine their food preferences was evaluated with the theoretical bases of the so-called ' health halo effect' which refers to the act of overestimating a single functional claim of the food, for example, ' I prefer to choose only low-fat



foods', without taking into account other macronutrients and nutrients, choices may not contribute to an expected result. In this research, we sought to determine individual factors, health awareness, LS level, the influences of different evaluations of messages linked to the nutrient content for a healthy and unhealthy food and whether these evaluations are mediated by reading nutritional information in labeling (CHOI; NORTHUP; REID, 2021).

The results demonstrated that LS had a positive influence on the interpretation of nutritional information labeling and the recognition of unhealthy amounts per serving. In contrast, LS negatively influenced purchase intention. In situations where the nutritional label communicated the larger portion size, it indicated the importance of subjective and objective knowledge, promoting different reactions from consumers (CHOI; NORTHUP; REID, 2021).

According to Pereira Neto (2021), when an individual adopts the habit of carrying out an in-depth search about their health condition through the main digital platforms, such as websites and virtual communities, they have the ability to become an expert in a specific area. In this sense, the search for recognition on nutritional labeling increases consumers' critical ability to choose foods that have a better nutritional composition, becoming an expert patient.

The expert patient is associated with a condition of acquisition of empowerment, in which individuals or groups can overcome by transforming a situation of 'vulnerability', 'inequality' or 'impotence' into a new condition of life with a state of greater autonomy, self-determination and political awareness (PEREIRA NETO, 2021) in relation to their role in society with greater access to information and knowledge. This change in behavior means that individuals have a more participatory development in sharing their experiences in health-disease processes in virtual communities (PEREIRA NETO, 2021).

In Malaysia, a study sought to evaluate aspects of childhood obesity in the pandemic related to parents' perceptions regarding health communication and how parents ensure that their children have healthy eating habits and how they seek information about intervention in childhood obesity. It was found that knowledge management and application are more efficient due to their greater LS and



communication within their social groups. The authors highlighted the importance of implementing effective health communication strategies to improve the population's HL (HASSIM et al., 2021).

The spread of misleading content and disinformation campaigns became known as “infodemic”, with strong repercussions in Brazil throughout the pandemic period. Misinformation was not created and disseminated only by unknown agents and underground circuits on digital platforms, but by political authorities in Brazil (VALENTE, 2022) and this contributed to the dissemination and adoption of foods that would not be beneficial for the treatment of COVID-19, in addition to problems of food insecurity and a greater propensity to increase the consumption of ultra-processed foods.

In a study carried out in Germany on the influence of social networks on the behavior of young people in relation to the development of diseases due to uncontrolled behavior, the visual language of German fitness influencers on Instagram and the body image portrayed were evaluated. The authors found that the followers were not a public with sufficient information and there was a lack of transparency in the communication processes. Furthermore, a lack of clarity regarding labeling requirements for commercial products or editorial posts on social media contribute to a lack of clarification; Broadcasting legislation and the ‘Telemedia Law’ are not sufficient to regulate digital communication. Therefore, there is a need to formulate political and uniform guidelines to adapt existing laws so that users and influencers understand the contributions of labeling to health promotion and prevention for this vulnerable group (PILGRIM, K.; BOHNET-JOSCHKO, 2022).

Considering that digital platforms are not neutral systems, as they seek to expand their active mediation in spheres, in order to control the data, information flows, interactions and transactions operated by the different types of users who participate in the ecosystem that it shapes, being above all, mediators of communicational interactions (VALENTE, 2020).

Furthermore, these communication processes are linked to marketing interests, the accumulation of capital through monetization and stimulation of followers' consumption of ideological and intentional content.

From the perspective of the technological paradigm, we do not understand this process in



a deterministic way, but when we reflect on the Marxian conception, it is possible to identify the contradictions of productive forces and social relations of production, through the critical theory of technology as a dialectical relationship between the general determinations of the system and technological systems that can be called “technological regulation” (VALENTE, 2020).

Discussion

Scientometric evaluation, it was possible to observe that the theme about HL and Health Communication, in the general context, and especially when related to the context of LA or LN, there are few publications and geolocation networks are concentrated in developed countries such as the United States and Australia. There are few studies related to epistemological issues in the field of LA and LN and there is a wide field of possibilities regarding both clinical and socio-cultural issues that can be formulated regarding the interactive processes of health communication in adherence to healthy eating habits.

In the process of research into communication processes and reception practices, it is important to encompass theoretical issues in the increasingly inextricable and strategic communication/culture relationships, which constitute the basis of transformations in the mode of social production. With this, it is possible to understand the communication processes and reception practices encompass these theoretical-methodological issues together with the ethical and political issue (MARTÍN-BARBERO, 2011).

From this perspective, the themes addressed in the field of LS and LN in the field of communication and health portrayed the link between the problems of low LS or inadequacies regarding behaviors and eating habits, in general, are related to theoretical-methodological issues in the production of content and communication strategies, as well as a lack of public policy formulation in the regulation of digital platforms.

There are distinctions and articulations between communication relations and the context,



the choice of the interactional device and the occurrences of communication processes with the participation of different social elements, they are above all heterogeneous, in the form of articulations and tensions, even when there is the same communication objective of society and its sectors and the need for organization in the flow of communication circulation, to highlight diversity and minimize the effects of dispersion (BRAGA, 2011). In this sense, in interactional processes it must be taken into account that when choosing the interactional device, it must be used to provide opportunities for the democratic insertion of all participants involved in relation to the content of the interactions. In the studies evaluated, nutritional information content was introduced in a prescriptive manner, but there was no interactional communication process to promote participants' adherence to health promotion and prevention processes.

In the field of LS and LA, the need to consider the awareness of the multidimensionality of communicative processes in society and their growing importance for the production of modernity in countries such as those in Latin America. Considering that there are many advances in LS, and mainly in LA and its epistemological emergence, it is important to consider aspects of transdisciplinarity that contribute to the reflection of object-problems in the field of communication in those of other social disciplines and in the construction of articulations of intertextualities with the media, cultural industries as matrices of disorganization and reorganization of social experience and the new web of actors and power strategies in the historical process of globalization in the field of communication and in modern society (DE LOPES, 2006).

From the perspective of Health Communication scenarios and trends from the perspective of the SUS, there is a clash between centrifugal forces, which drive the movement for renewal and expansion of the right to communication, and centripetal forces that act in the conservative sense of what is already crystallized and for the naturalization of current models (ARAÚJO; CARDOSO; MURTINHO, 2011). In the field of LN and LA, there is conformity with the reproduction of marketing models that are disseminated on digital platforms, mainly with engagement content on Instagram following trends from other countries, as presented in table 1, mainly linked to the reduction of



obesity , functional foods and nutrition and aesthetics, but often disconnected from the guidelines or the Food Guide for the Brazilian Population . (BRAZIL, 2014).

In Brazil, the difficulties of implementing communication in line with SUS reflect the tensions in the field of political, ideological, economic and cultural disputes that spread on different scales and through phenomena of different orders, moving and building the possibilities for change in society . To strengthen the SUS, it is important to consider connections in the domains of the SUS itself, based on the consideration of its principles, although without losing sight of the links and relationships of interdependence that health and its communicative practices maintain with the broader social formation in the which they are located (ARAÚJO; CARDOSO; MURTINHO, 2011).

It is important to reflect on contemporary challenges regarding the promotion of public policies, knowledge and practices around guaranteeing the right to communication as a dimension of the right to health (STEVANIM; MURTINHO, 2021). The first challenge is about strengthening democratic experiences and struggles amid the dismantling of democratic references built in the 1988 Constitution. The second challenge refers to confronting inequalities in the exercise of the right to communication that threaten the guarantee of universal health and integral to the population. The third challenge is a reflection of the interaction between the fields of communication and health: it translates into the need to reconcile the promotion of public policies and the development of projects and initiatives aimed at the dialogue between communication and health with everyday experiences that are not reduced institutional limits (STEVANIM; MURTINHO, 2021).

Conclusion

From this perspective, considering the transdisciplinarity of these challenges and their important concepts for producing knowledge about communication processes in the field of Nutrition and Food, the need to build a theoretical-methodological model on LN and LA that considers regional, social and cultural diversities , as well as epidemiological issues in the context of public health such as



chronic non-communicable diseases. The need to formulate Communication and Health policies and health communication strategies for health promotion and prevention in line with the strengthening of the SUS.

Therefore, the insertion of LN and LA can constitute strategies with potential effectiveness in health promotion and prevention, when linked to health communication processes. It is necessary to plan new studies in the Brazilian population to analyze the benefits on public health.

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