



# Research on the Academia da Cidade and Academia da Saúde Programs: scoping review

Pesquisas sobre os Programas Academia da Cidade e Academia da Saúde: revisão de escopo

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## ABSTRACT

In order to identify the research that addressed the Academia da Cidade and Academia da Saúde Programs (ACP/ASP), a scoping review was conducted in April 2020 in five electronic databases and in reference lists aiming to identify scientific articles that had data collections carried out in the facilities of the ACP/ASP or, that somehow involved the populations of the localities where the programs were implemented. Of the 321 initial records, the descriptive synthesis consisted of 59 studies, which had as their most frequent characteristics: cross-sectional design, use of quantitative approaches in data collection and analysis, Nutrition as a central topic, and involvement of users (adults and the elderly). In conclusion, longitudinal studies involving all actors (managers, practitioners and users) and covering different health topics, besides promoting the approximation between academia and decision makers, may be promising in the sense of better evaluating the impact that the program represents in the life of the communities that are attended.

**Keywords:** Public policy; Health promotion; Adult; Aged; Review.

## RESUMO

*No sentido de identificar as pesquisas que abordam os Programas Academia da Cidade e Academia da Saúde (PAC/PAS), em abril de 2020 foi conduzida uma revisão de escopo, em cinco bases de dados eletrônicas em listas de referências, a fim de identificar artigos científicos originais que tiveram coletas de dados realizadas nas instalações do PAC/PAS ou, que, de alguma forma envolveram as populações das localidades em que foram implantados os programas. De 321 registros iniciais, a síntese foi composta por 59 artigos científicos, que apresentaram como características mais frequentes: delineamento transversal, uso de abordagens quantitativas nas coletas e análises de dados, Nutrição como temática central e envolvimento de usuários (adultos e idosos). Em conclusão, estudos longitudinais envolvendo todos os atores (gestores, profissionais e usuários) e distintas temáticas da saúde, além de promoverem a aproximação entre a academia e tomadores de decisão, podem ser promissores no sentido de melhor avaliar o impacto que o programa representa na vida das comunidades que são atendidas.*

**Palavras-chave:** Política pública; Promoção da saúde; Adulto; Idoso; Revisão.

## Introduction

In a broader perspective of health, which takes into account both interprofessional work and the social and

structural determinants of people, in 2002 the Academia da Cidade Program (ACP) was introduced in Recife, Pernambuco (<http://www2.recife.pe.gov.br/>

servico/academia-da-cidade) as a public policy to expand the community access to educational actions, aimed to promoting body practices and physical activities (BPPA)<sup>1</sup>, which at the time emerged as priorities in the national public health agenda, much for the recognition of their preventive role in the face of non-communicable diseases<sup>2</sup>.

Over the years, in clear recognition of its success, the ACP has been redesigned and in 2011 expanded to the national level, being called Academia da Saúde Program (ASP)<sup>3</sup>. It is worth mentioning that the ASP was introduced after the publication of the national health promotion policy<sup>4</sup> which organizes and guides the ways to promote health in the country under the principles of universality and equity<sup>5,6</sup> and its operationalization, in summary, is through the implementation of public spaces (poles) with infrastructure and qualified practitioners, offering actions aimed at promoting healthy lifestyles and leisure<sup>3</sup>.

Given its potential, the ACP/ASP have become the focus of several research projects, and important aspects of its implementation have also come to be discussed in the academic area, in different themes<sup>7-10</sup>, which justifies the elaboration of a synthesis that may, in addition to presenting its state of the art, support the elaboration of future studies in its contexts. Thus, this study aimed to analyze the characteristics of the scientific articles that were developed in the contexts of these programs, identifying locations, themes, approaches and populations covered.

## Methods

In order to identify and map the available evidence, this research is characterized as a Scoping Review<sup>11</sup>.

As inclusion criteria, original studies were searched, which had data collections performed at the ACP/ASP facilities or, which somehow involved the populations of the localities where these programs were implemented, without restrictions in regard of the data collection and publication years, health topics covered, study designs, approaches used in data collection and analysis and populations, either in their relationship to the programs (e.g. managers, practitioners, users) or by any specific characteristics (e.g. age group, clinical condition and socioeconomic condition).

On April 9, 2020, potential studies were retrieved by systematic searches in five electronic databases (Lilacs, Pubmed, Scielo, Scopus and Web of Science), based on the strategy applied in Pubmed: (((health gym[-

Text Word]) OR city gym[Text Word]) OR (((health gym[Text Word])) OR health academy[Text Word])) AND Brazil[Text Word]). To avoid the loss of relevant material, complementary searches were also made in the reference lists of studies evaluated by their full texts.

The duplicates were checked by one researcher (PG) and the titles and abstracts screening were made by two researchers (MT and PG), independently, with the participation of a third researcher (DA) to define eligibility. Subsequently, all researchers (CA, DS, DA, EC, MT, PG, RF) participated in the full text's assessment and the data extraction, also independently, having their work double checked.

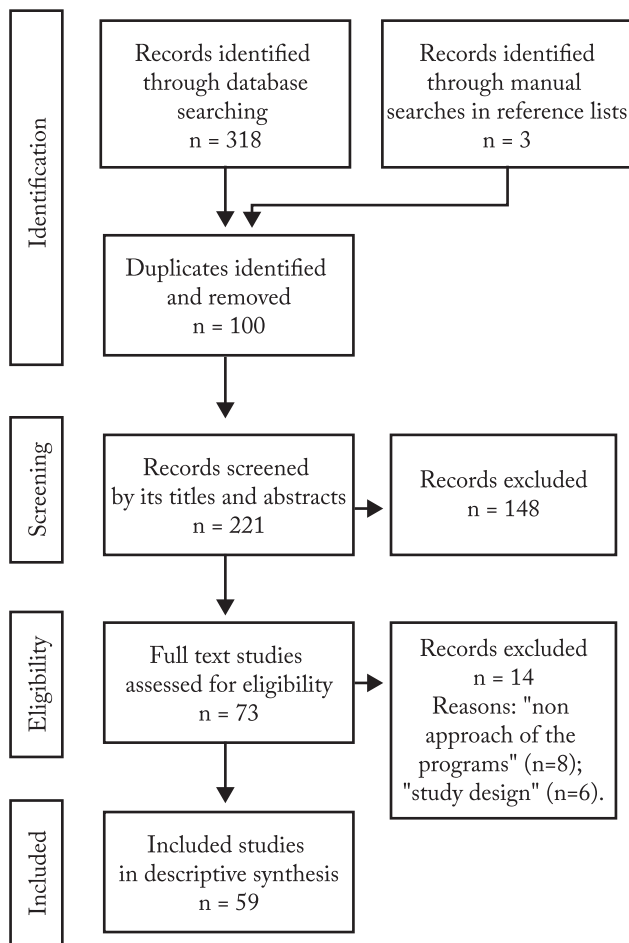
The data extraction occurred in an electronic spreadsheet, organized from the program identification (e.g. if ACP or ASP), health topic(s) covered, place of research, year of data collection, sample size, age range, research design and approach(es) used for data collection and statistical analysis. After this stage the data were exported to the SPSS program, where the descriptive analyses (relative and absolute frequencies) were performed.

## Results

At all, 318 articles were found by systematic searches (Figure 1). After exclusion of 100 duplicates among the databases, of the 221 articles screened by their titles and abstracts, 148 were classified as ineligible (n = 109 by agreement between the two independent researchers; n = 39 by decision of the third researcher). Thus, of the 70 articles evaluated by its full texts, 14 were excluded, considering the reasons: "non approach of the programs" (n = 8) and "study design" (n = 6). Given the inclusion of three studies from manual searches, the descriptive synthesis of this review was based on data of 59 original studies, detailed in Appendix 1.

Table 1 shows that the largest portion of the studies related to ACP/ASP was published between 2015 and 2019 (n = 41; 69.5%). By denomination, 32 articles were conducted in the context of the ACP (54.2%) and, by location, studies conducted in Belo Horizonte (n = 27; 45.8%) and in Recife (n = 17; 28.7%) can be highlighted. Regarding the covered topics, Nutrition (n = 22; 37.3%) and Assessment of Program (n = 19; 32.2%) prevailed. Most of the articles presented data collections between 2010 and 2014 (n = 27; 45.8%).

Considering the participants relationship with the program, it was observed that "users" were the most represented category among the included studies, with 44 of them, either exclusively with users (n = 38) or evaluat-



**Figure 1** – Flowchart of systematic review.

ed with managers and practitioners (n = 4), practitioners (n = 1) or territories (n = 1). Considering the studies that involved users in the samples (n = 44), sample sizes varied among the studies, with more frequent samples between 100 and 499 participants (n = 14; 31.8%) and equal to or above 1000 participants (n = 13; 29.5%). Most surveys addressed both sexes (n = 29; 65.9%) and involving populations of adults and older adults (n = 30; 68.2%) - Table 2. Table 2 also highlights the high frequency of studies that presented cross-sectional design (n = 41; 69.5%) and the predominance of quantitative approaches for data collection and analysis (n = 37; 62.7%).

## Discussion

The beginning of the ACP in the Recife (2002) came about as a policy and the main guidelines proposed the construction of a Healthy Recife city, with metropolitan responsibility, integrated actions, decentralized planning and participatory budgeting to meet the health needs of the population, with an expanded focus on actions to health promotion and care. Thus, it can be

**Table 1** – Descriptive characteristics of included studies developed on Academia da Cidade Program/Academia da Saúde Program (n = 59).

Variables	n	%
Year of publication		
2015–2019	41	69.5
2010–2014	15	25.4
2009	2	3.4
2020	1	1.7
Denominations		
Academia da Cidade Program	32	54.2
Academia da Saúde Program	27	45.8
Study location – City (State)		
Belo Horizonte (Minas Gerais)	27	45.8
Recife (Pernambuco)	17	28.7
Aracaju (Sergipe)	4	6.8
Country wide	4	6.8
Rio de Janeiro (Rio de Janeiro)	2	3.4
Pernambuco State	1	1.7
Petrolina (Pernambuco)	1	1.7
Santa Catarina State	1	1.7
Two cities of São Paulo State	1	1.7
Vitória (Espírito Santo)	1	1.7
Topics covered by the studies		
Nutrition	22	37.3
Program Assessment	19	32.2
Mixed	7	11.9
Physical activity	5	8.5
Quality of life	3	5.1
Conception of health	2	3.4
Women health	1	1.7
Year of data collection		
2010–2014	27	45.8
2005–2009	12	20.3
2015–2017	10	16.9
Not described	9	15.3
2002–2004	1	1.7

considered that the studies developed in their contexts were also important in their consolidation and expansion to the national level in 2011<sup>3</sup>, presenting the potential of this public policy, not only in the specificity of the promotion of BPPA, but also in other health topics, such as Nutrition, Quality of Life and Women’s Health.

In this sense, Nutrition was the most frequent health topic covered among the included studies, with emphasis on the studies developed by researchers from Federal University of Minas Gerais. It’s important to highlight that Brazil has a national dietary guideline<sup>12</sup>, which, in some way, may be supporting the interest and research in the theme. More specifically, these studies about Nutrition address important issues such as food

**Table 2** – Descriptive characteristics of included studies developed on Academia da Cidade Program/Academia da Saúde Program (n = 59).

Variables	n	%
Participants of study		
Users	38	64.4
Practitioners	6	10.1
Managers	5	8.5
Managers and practitioners	4	6.8
Managers, practitioners and users	4	6.8
Practitioners and users	1	1.7
Users and territories	1	1.7
Sample size (in studies conducted with users; n = 44)		
100–499	14	31.8
≥1000	13	29.5
1–49	8	18.2
50–99	4	9.0
500–999	4	9.0
Not described	2	4.5
Sex (in studies conducted with users; n = 44)		
Females and males	29	65.9
Females	13	29.6
Not described	2	4.5
Age range (in studies conducted with users; n = 44)		
Adults and older Adults	30	68.2
Adults	10	22.8
Older adults	2	4.5
Not described	2	4.5
Study design		
Cross-sectional study	41	69.5
Case study	9	15.3
Intervention study	7	11.8
Ecologic	2	3.4
Data collection and analysis approach		
Quantitative	37	62.7
Qualitative	18	30.5
Mixed	4	6.8

consumption, food profile, nutritional status, knowledge about healthy eating habits and food environment.

It is interesting to note that the ACP in Belo Horizonte began in 2006 (<https://prefeitura.pbh.gov.br/saude/informacoes/atencao-a-saude/promocao-da-saude/academia-da-cidade>), four years later than the precursor program in Recife, and presented a larger academic production, possibly showing a greater interest of the university in local public policy, which we cannot say if the evidence produced was shared and used by public power. Bringing these actors together, from the beginning of the identification of problems to be investigated, may generate relevant public policy research<sup>13</sup>.

On the other hand, only five studies presented the

BPPA as their central topic. In view of the program proposal and the dynamics of the activities offered at the poles, surveys and intervention studies could be conducted in the context of the ACP/ASP, not only related to users and the profile of the activities developed. As a consequence of a two-way approach between public authorities and research institutions, intervention projects can be developed to provide continuing education to managers, practitioners and users, as well as longitudinal studies aimed at users, from a broader perspective both in terms of objectives (e.g., with the aim of identifying preferences, barriers and facilitators) and the use of mixed approaches to identifying phenomena (qualitative and quantitative). These are very important points since the introduction of the ACP/ASP aims to reduce inequity in access to the BPPA in the country.

None of the included studies were focused on samples of children and adolescents. This can be justified by the characteristics of the programs, such as opening hours and types of activities offered, which can be more attractive to adult and elderly populations, especially women. In Sá et al.<sup>14</sup> it can be observed that managers point out as one of the main difficulties to cover activities with children and adolescents in the context of the ASP. Given the high indicators of physical inactivity<sup>15</sup> and consumption of ultra-processed foods<sup>16</sup>, it is important that new strategies are developed for children and adolescents to be covered by the activities of PAS.

When analyzing the categories of quality evaluation, proposed by Donabedian (1980)<sup>17</sup> studies were divided into three categories: structure, process and outcome evaluation. We found that out of 59 studies, 36 (61%) evaluated the outcome identified by physical activity or nutrition variables as analysis' outcomes and 23 (39%) studies evaluated programs' structure or process.

One limitation that can be highlighted in the set of studies included is the lack of application of evaluation theories or models. Although different qualitative and quantitative methods have been used among the original studies, few offer a more comprehensive proposal of the analysis model, which goes beyond the analysis of effectiveness (e.g., verification of effects on specific outcomes - often biological). It is important that future studies introduce evaluation models, such as the RE-AIM model<sup>18</sup> that would enable an analysis of other important elements of the Program, such as: scope, effectiveness, maintenance, adoption, implementation.

The absence of searches for potential studies on dissertations and theses databases, as well as other

types of publication, such as annals of congresses, may be considered a limitation of this study. The option of not including other scientific publications was because, usually, dissertations, theses and abstracts become full articles further up. On the other hand, it can be pointed out that, this being a scoping review, its synthesis allowed a look at the state of the art of studies conducted in the context of the ACP/ASP, stimulating the discussion of its potentials, limitations and advances.

Finally, data from this review suggest that most studies developed in the context of the ACP/ASP presented a transversal design, with quantitative approaches to data collection and analysis, had the Nutrition as its central topic and was directed to users (adults and the older adults). Longitudinal studies involving all actors (managers, practitioners and users), in addition to promoting rapprochement between universities and public policies, could be promising in the sense of better assessing the impact that the program represents in the life of the communities that are served by it. In this way, valuable information would be gained that would reinforce the ACP/ASP as a public policy of proven effectiveness and base-evidence recommended for large-scale implementation in the country.

### Conflict of interest

The authors declare no conflict of interest.

### Author's contributions

Guerra PH, conception of the central idea of the study, elaboration of systematic searches, screening of titles and abstracts, full texts assessment, descriptive synthesis development, analysis of results and writing of the text; Andrade DR, screening of titles and abstracts, full texts assessment, descriptive synthesis development, analysis of results and revision of the text; Rodriguez-Añez CR, full texts assessment, descriptive synthesis development, analysis of results and revision of the text; Santos DL, full texts assessment, descriptive synthesis development, analysis of results and revision of the text; Camargo EM, full texts assessment, descriptive synthesis development, analysis of results and revision of the text; Fermio RC, full texts assessment, descriptive synthesis development, analysis of results and revision of the text; Tenorio MCM, screening of titles and abstracts, full texts assessment, descriptive synthesis development, analysis of results and revision of the text.

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**Appendix 1** – General description of included studies (n = 59)

Authors	Title	Topic	Study location	Sample size	Relationship	Sex*	Age range*	Study design	Approach
Academia da Cidade Program (N = 32)									
Alves et al. 2015	Climacteric: intensity of symptoms and sexual performance	Woman Health	Recife (Pernambuco)	260	Users	F	A/OA	CS	QNT
Brandão et al. 2012	Self-reported health and quality of life among hikers attending the Academia das Cidades Program, Petrolina, Pernambuco, Brazil	Quality of Life	Petrolina (Pernambuco)	300	Users	F/M	A/OA	CS	QNT
Cazarin et al., 2019	Sustainability analysis of a health promotion intervention in Recife, Pernambuco, Brazil	Program Assessment	Recife (Pernambuco)	39	Manag., Pract. and Users	nd	nd	Case	QLT
Costa et al., 2012	Healthy eating index of women exercising in the "City Gym Program", Aracaju, Sergipe, Brazil	Nutrition	Aracaju (Sergipe)	169	Users	F	A	CS	QNT
Costa et al., 2012	Profile of health, nutritional status and knowledge of level in nutrition Academia da Cidade Program of users - Aracaju, Sergipe	Nutrition	Aracaju (Sergipe)	191	Users	F	A	CS	QNT
Costa et al., 2013	City Academy: a health promotion service in the healthcare network of the Unified Health System	Nutrition	Belo Horizonte (Minas Gerais)	560	Users	F	A/OA	CS	QNT
Feitosa et al., 2016	Users' perception of actions, improvement in quality of life and satisfaction with the Academia da Cidade Program	Mixed	Recife (Pernambuco)	28	Users	F	A/OA	Case	QLT
Fernandes et al., 2015	Leisure-time physical activity in the vicinity of Academias da Cidade Program in Belo Horizonte, Minas Gerais State, Brazil: the impact of a health promotion program on the community	Physical Activity	Belo Horizonte (Minas Gerais)	1,621	Users	F/M	A/OA	IS	QLT
Fonte et al., 2016	Effects of a physical activity program on the quality of life among elderly people in Brazil	Quality of Life	Recife (Pernambuco)	181	Users	F/M	OA	CS	QLT
Hallal et al., 2009	Quali-quantitative evaluation of the "Academia da Cidade" program from recife, brazil: perceptions of the professionals working in the program	Program Assessment	Recife (Pernambuco)	12	Pract.	na	na	CS	Mixed

Continue...

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Authors	Title	Topic	Study location	Sample size	Relationship	Sex*	Age range*	Study design	Approach
Hallal et al., 2010	Evaluation of the Academia da Cidade program to promote physical activity in Recife, Pernambuco State, Brazil: perceptions of users and non-users	Program Assessment	Recife (Pernambuco)	554	Users	F/M	A/OA	CS	QNT
Horta; Santos, 2015	Dietary quality among overweight women attended in an 'Academia da Cidade' in Belo Horizonte, Minas Gerais state	Nutrition	Belo Horizonte (Minas Gerais)	140	Users	F	A/OA	CS	QNT
Lemos et al., 2016	City Academy program: description of adherence factors and nonadherence	Program Assessment	Recife (Pernambuco)	822	Users	F/M	A	CS	QNT
Lemos et al., 2016	Factors associated with adherence to the Academia da Cidade Program in Recife	Program Assessment	Recife (Pernambuco)	533	Users	F/M	A	CS	QNT
Lopes et al., 2012	Factors associated to overweight among women	Nutrition	Belo Horizonte (Minas Gerais)	262	Users	F	A/OA	CS	QNT
Maciel et al., 2018	Analysis of the discourse on health in a governmental program of physical activity	Conception of Health	Belo Horizonte (Minas Gerais)	18	Manag., Pract. and Users	F/M	A	Case	QLT
Maciel et al., 2019	Discursive analysis about health promotion in a governmental program of physical activity	Conception of Health	Belo Horizonte (Minas Gerais)	18	Manag., Pract. and Users	F/M	A	Case	QLT
Melo et al., 2016	Performance of Physical Education Professionals from the Academia da Cidade Program in Primary Health Care in Recife	Program Assessment	Recife (Pernambuco)	104	Pract.	F/M	A/OA	CS	QNT
Mendonça et al., 2010	Exposure to a community-wide physical activity promotion program and leisure-time physical activity in Aracaju, Brazil	Mixed	Aracaju (Sergipe)	2,267	Users	F/M	A/OA	CS	QNT
Menezes et al., 2011	Factors Associated with Diabetes Mellitus in Participants of the 'Academia da Cidade' Program in the Eastern Region of the Municipality of Belo Horizonte, State of Minas Gerais, Brazil, 2007 and 2008	Nutrition	Belo Horizonte (Minas Gerais)	364	Users	F/M	A/OA	CS	QNT
Moreira et al., 2014	Eating behavior toward oil and fat consumption versus dietary fat intake	Nutrition	Belo Horizonte (Minas Gerais)	168	Users	F	A	CS	QNT
Moura et al., 2016	Knowledge of Family Health Strategy professionals regarding the Academia da Cidade Program (ACP) in the city of Recife	Program Assessment	Recife (Pernambuco)	206	Pract.	na	na	CS	QNT
Padilha et al., 2015	Evaluability study of the Carioca Health Academy Program: challenges for health promotion	Program Assessment	Rio de Janeiro (Rio de Janeiro)	nd	Users	na	na	Case	QLT
Paes et al., 2011	Lifestyle in hypertensive subjects attending the "Academia da Cidade" program, Recife, Brazil	Mixed	Recife (Pernambuco)	78	Users	F/M	A	CS	QNT
Paez et al., 2015	Bridging the gap between research and practice: an assessment of external validity of community-based physical activity programs in Bogotá, Colombia, and Recife, Brazil	Physical Activity	Recife (Pernambuco)	17	Manag. and Pract.	na	na	CS	QLT
Pajeu et al., 2016	Interaction between the Family Health Units and the Academia da Cidade Program in Recife, Northeastern Brazil	Program Assessment	Recife (Pernambuco)	203	Pract.	na	na	CS	QNT
Pereira et al., 2014	Women's meal frequency and nutritional and health profiles	Nutrition	Belo Horizonte (Minas Gerais)	342	Users	F	A/OA	CS	QNT

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Authors	Title	Topic	Study location	Sample size	Relationship	Sex*	Age range*	Study design	Approach
Silva et al., 2013	Nutritional intervention workshops in a health-promotion service of Belo Horizonte, Minas Gerais	Nutrition	Belo Horizonte (Minas Gerais)	132	Users	F/M	A/OA	IS	QNT
Silva et al., 2014	Access and use of the Community Fitness Center of Belo Horizonte: the perspective of users and monitors	Program Assessment	Belo Horizonte (Minas Gerais)	25	Manag. and Pract.	F/M	A/OA	Case	QLT
Simões et al., 2009	Effects of a Community-Based, Professionally Supervised Intervention on Physical Activity Levels Among Residents of Recife, Brazil	Physical Activity	Recife (Pernambuco)	2,038	Users	F/M	A/OA	CS	QNT
Simões et al., 2017	Effectiveness of a scaled up physical activity intervention in Brazil: A natural experiment	Physical Activity	Pernambuco	3,685	Users	F/M	A/OA	IS	QNT
Teixeira et al., 2013	Educational nutritional intervention as an effective tool for changing eating habits and body weight among those who practice physical activities	Mixed	Aracaju (SE)	52	Users	F	A	IS	QNT
Academia da Saúde Program (N = 27)									
Carvalho et al. 2018	Perception versus intake of fruit and vegetables	Nutrition	Belo Horizonte (Minas Gerais)	3,414	Users	F/M	A/OA	CS	QNT
Costa et al., 2019	Does access to healthy food vary according to socioeconomic status and to food store type? an ecologic study	Nutrition	Belo Horizonte (Minas Gerais)	2,831	Users and Territories	F	A/OA	Eco	QNT
Deus et al., 2015	The impact of a nutritional intervention on the nutritional status and anthropometric profile of participants in the Health Gym Programme in Brazil	Nutrition	Belo Horizonte (Minas Gerais)	124	Users	F	A/OA	IS	QNT
Fernandes et al., 2017	Health Academies Program and the promotion of physical activity in the city: the experience of Belo Horizonte, Minas Gerais, Brazil	Physical Activity	Belo Horizonte (Minas Gerais)	4,450	Users	F/M	A/OA	CS	Mixed
Ferreira et al., 2017	Social representations of older adults regarding quality of life	Qualidade de Vida	Rio de Janeiro (Rio de Janeiro)	30	Users	F/M	OA	CS	QLT
Figueira et al., 2014	Assessing fruit and vegetable consumption among families of users of the Programa Academia da Saúde (PAS)	Nutrition	Belo Horizonte (Minas Gerais)	4	Users	F	A/OA	CS	QLT
Figueira et al., 2016	Promoters and barriers to fruit and vegetable consumption among Health Academy Program's users	Nutrition	Belo Horizonte (Minas Gerais)	62	Users	F/M	A/OA	CS	QLT
Florindo et al., 2016	Description of health promotion actions in Brazilian cities that received funds to develop "Academia da Saúde"	Program Assessment	National	914	Manag.	na	na	CS	QNT
Florindo et al., 2016	Promotion of physical activity, healthy eating and family health in municipalities with health gym	Mixed	National	914	Manag.	na	na	CS	QNT
Freitas et al., 2019	Consumer food environment and overweight	Nutrition	Belo Horizonte (Minas Gerais)	2,810	Users	F/M	A/OA	CS	Mixed
Guarda et al., 2015	Characterization of physical activity program teams and their work process	Program Assessment	Recife (Pernambuco)	18	Pract.	na	na	CS	QLT
Guarda et al., 2016	Self-perception of the objective, object and work products of Physical Education Professionals belonging to the Academia da Saúde Program	Program Assessment	Recife (Pernambuco)	18	Pract.	na	na	CS	QLT

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Authors	Title	Topic	Study location	Sample size	Relationship	Sex*	Age range*	Study design	Approach
Ivo, Malta e Freitas, 2019	Modes of thinking of the professionals of the Health Academy Program about health and disease and their implications in actions of health promotion	Program Assessment	Belo Horizonte (Minas Gerais)	32	Manag. and Pract.	na	na	CS	QLT
Jorge et al., 2018	Health Academy Program: association of nutritional knowledge and anthropometric parameters	Nutrition	Vitória (Espírito Santo)	92	Users	F/M	A/OA	CS	QNT
Machado et al., 2017	Misreporting of energy intake among users of Health Promotion Services	Nutrition	Belo Horizonte (Minas Gerais)	487	Users	F/M	A/OA	CS	QNT
Maciel et al., 2019	Performance evaluation of the Health Gym Program in Belo Horizonte: a case study	Program Assessment	Belo Horizonte (Minas Gerais)	25	Manag., Pract. and Users	F/M	A	Case	QLT
Mendonça et al., 2019	Monotony in the consumption of fruits and vegetables and food environment characteristics	Nutrition	Belo Horizonte (Minas Gerais)	3,414	Users	F/M	A/OA	CS	QNT
Mendonça et al., 2019	Barriers to and facilitators for adherence to nutritional intervention: consumption of fruits and vegetables	Nutrition	Belo Horizonte (Minas Gerais)	1,483	Users	F/M	A/OA	IS	Mixed
Menezes et al., 2017	Local food environment and fruit and vegetable consumption: an ecological study	Nutrition	Belo Horizonte (Minas Gerais)	3,414	Users	F/M	A/OA	Eco	QNT
Menezes et al., 2018	Fruit and vegetable intake: influence of perceived food environment and self-efficacy	Nutrition	Belo Horizonte (Minas Gerais)	3,414	Users	F/M	A/OA	CS	QNT
Menezes et al., 2018	Individual and food environmental factors: association with diet	Nutrition	Belo Horizonte (Minas Gerais)	2,944	Users	F/M	A/OA	CS	QNT
Meurer et al., 2019	Effectiveness of the VAMOS strategy for increasing physical activity and healthy dietary habits: a randomized controlled community trial	Mixed	Belo Horizonte (Minas Gerais)	291	Users	F/M	A/OA	IS	QNT
Mota et al., 2016	Federative relations at the Programa Academia da Saúde (Health Academy Program): study of two cities of the state of São Paulo	Program Assessment	Two cities of São Paulo state	5	Manag.	na	na	Case	QLT
Paiva Neto et al., 2019	Barriers to implementation of "Academia da saúde program" in Santa Catarina	Program Assessment	Santa Catarina state	26	Manag.	na	na	CS	QNT
Sá et al., 2016	The Health Academy Program as a strategy to promote health and healthy lifestyles: the national implementation scenario	Program Assessment	National	nd	Manag.	na	na	CS	QNT
Silva et al., 2017	Evaluability of the Health Gym Program in Recife, Pernambuco State, Brazil	Program Assessment	Recife (Pernambuco)	14	Manag. and Pract.	na	na	Case	QLT
Wolker et al., 2020	Monitoring the Health Academy program from 2015 to 2017	Program Assessment	National	na	Manag. and Pract.	na	na	CS	QNT

Legends: \* information about users; A = adults; Case = case study; CS = cross-sectional; F = females; IS = intervention study; M = males; Manag = managers; na = not applicable; nd: not described; AO =: older adults; Pract = practitioners; QLT = qualitative; QNT = quantitative.