Matrix role of the Primary Care Extended Centers: an integrative review of the literature

Função matriciadora dos Núcleos Ampliados de Saúde da Família: uma revisão integrativa da literatura

André Lucas Maffissoni¹, Kátia Jamile da Silva², Carine Vendruscolo³, Letícia de Lima Trindade⁴, Fernanda Karla Metelski⁵

DOI: 10.1590/0103-1104201811918

ABSTRACT Integrative review of the literature that sought to identify the theoretical-conceptual ideas that support the creation and development of the Family Health and Primary Care Extended Centers (Nasf-AB) as a support device within this assistance level, as well as analyze the process of matrixing according to the characteristics presented by the current scientific literature, based on the analysis of manuscripts published in the databases of Virtual Health Library, PubMed and Portal of Periodicals of the Coordination Office for Improvement of Higher Education Personnel (Capes), using the term ‘Family Health Support Team’. After the application of the inclusion criteria, 33 studies resulted from it. It was evidenced a predominance of qualitative studies, which indicate the characteristics of the action of the Nasf-AB, organized in technical-pedagogical activities with the Family Health Strategy and clinical-assistance activities, aimed at the care of users and groups. The informations found in the scientific literature shows difficulties and challenges related to the operationalization of the work of the Nasf-AB.

KEYWORDS Health management. Primary Health Care. Family health.

RESUMO Revisão integrativa da literatura que buscou identificar as concepções teórico-conceituais que sustentam a criação e o desenvolvimento dos Núcleos Ampliados de Saúde da Família e Atenção Básica (Nasf-AB) como dispositivo de apoio no âmbito desse nível assistencial, bem como analisar o processo de matriciamento de acordo com as características apresentadas pela literatura científica atual, a partir da análise de manuscritos publicados nas bases da Biblioteca Virtual em Saúde, PubMed e Portal de Periódicos da Coordenação de Aperfeiçoamento de Pessoal de Nível Superior (Capes), utilizando-se o termo ‘Núcleo de Apoio à Saúde da Família’. Após a aplicação dos critérios de inclusão, resultaram 33 trabalhos. Evidenciou-se predominio de estudos qualitativos, os quais sinalizam características de atuação do Nasf-AB, organizadas em atividades técnico-pedagógicas com as equipes de Saúde da Família, e clínico-assistenciais, voltadas para o atendimento dos usuários e coletivos. As informações encontradas na literatura científica demonstram dificuldades e desafios relacionados com a operacionalização do trabalho do Nasf-AB.

Introduction

Primary Health Care (PHC), or Basic Care (AB) in Brazil, is configured as one of the main advances in the Unified Health System (SUS), being responsible for the Health Care Network (RAS) and the main gateway of the user in this System. Through its multiprofessional generalist teams of the Family Health Strategy (FHS), which represents its structuring axis, AB seeks to meet the attributes of universality, completeness, longitudinality and coordination of care, both individually and collectively, increasing access and impacting the constraints/determinants of the health of the inhabitants of the territory.

The implementation of Family Health teams (eSF) to structure the AB significantly expanded access to health, however, there is a consensus regarding the need for investment in the qualification of professionals, mainly, to increase the resolubility in this level of attention. The situations in which general practitioners of AB are faced with obstacles are recurring, mainly regarding the resolubility of care. At that, in order to support eSF, the Ministry of Health (MH) created, in 2008, through Ordinance GM nº 154, the Family Health Support Centers (Nasf). These emerge with the purpose of supporting the consolidation of AB, expanding the offerings of health services, the resolutive potential and the comprehensiveness of actions carried out at the primary care level. Recently, with the revision of the National Primary Health Care Policy (PNAB), this device is now recognized as the Family Health and Primary Care Extended Centers (Nasf-AB).

Upon the Nasf-AB, falls the responsibility of the matrixing of the eSF and Basic Care teams (eAB). This activity is possible, basically, by two forms of support: clinical-assistance, in which Nasf-AB professionals offer clinical care, individual or collective, to the users; and technical-pedagogical, in which the professionals of Nasf-AB share the knowledge and practices of their professional centers with the workers of the FHS.

The scientific literature addresses the construction of Nasf-AB as a possibility to create management arrangements and work processes capable of reorienting the way in which health is produced in AB under SUS. However, because it is a relatively recent determination of MH, there are difficulties in understanding the real attributes of the Centers and their functions, especially in relation to the process of matrix support to eSF.

For this reason, managers and professionals should understand the theoretical and legal pillars that underpin the performance of the Nasf-AB and, in addition, identify which practices have been used to develop the matrixing process in daily work. In this sense, the objective is to identify the theoretical-conceptual conceptions that support the creation and development of Nasf-AB as a support device within this assistance level, as well as to analyze the process of matrixing based on the characteristics presented by the current scientific literature.

There is no pretension to exhaust the subject, to extend possibilities or establish patterns that indicate how Nasf-AB should or should not act in the field of collective health and/or what their specific actions should be. It is considered that an integrative review of the literature on the subject can promote theoretical contributions capable of supporting reflections related to the professional practice of its components, which is substantial to improve the work in SUS.

Methodology

Integrative literature review study, with qualitative design, developed through protocol validation by researcher not involved with the research and with experience in the topic. The review was conducted through six steps: choice of the research question; establishment of inclusion criteria and exclusion of studies; sample selection; search for the information desired in the manuscripts;
inclusion of selected papers; discussion and analysis of results.

The research was based on the following question: how does the scientific literature deal with the theoretical-conceptual conceptions that support the creation and development of Nasf-AB as a support device within the scope of this assistance level from its matrix role? In order to search for studies, the following inclusion criteria were used: papers published in the format of scientific articles (original articles, systematized reviews, theoretical essays, reflections, experience reports and editorials); works available online in full in English, Portuguese or Spanish; and studies whose titles, abstracts or keywords addressed the theme in the period from 2008 to 2016. This time span was delimited because the creation of Nasf-AB had been approved in Brazil by Ordinance nº 154, of January 24, 2008. Duplicate articles were considered only once.

The search for the studies occurred in the months of March, April and May of 2017, in the databases of the Virtual Health Library (VHL), PubMed and Portal of Periodicals of the Coordination Office for Improvement of Higher Education Personnel (Capes). The selection of the sample was developed from the free search for articles with the term ‘Family Health Support Centers’, without quotes. Because it is a national research and because Nasf-AB is an exclusive policy of Brazil, it was considered that only from this search structure the objectives be achieved. As at the time of data collection PNAB had not yet been reviewed, the term was retained with the original name. The study search flow is illustrated in figure 1.

Figure 1. Flowchart of the studies selected for the research

Definition of guiding question and term

Search in databases

VHL (n=120) PubMed (n=4) Periodicals Capes (n=139)

Application of inclusion and exclusion criteria

Duplicate studies

Did not address the theme

Newspaper article

VHL (n=19) PubMed (n=2); VHL (n=66) Periodicals Capes (n=110) VHL (n=1)

Pre-selected studies

VHL (n=34) PubMed (n=2) Periodicals Capes (n=28)

Rescue and reading of complete articles

Excluded Periodicals Capes:

11 did not meet the review criteria; 1 course conclusion paper; 1 summary of the dissertation.

Excluded VHL:

16 did not meet the review criteria; course conclusion paper; 1 summary of the thesis.

33 Selected studies responded positively to peer review

Periodicals Capes (n=15) PubMed (n=2) VHL (n=16)

Source: Own elaboration.
The pre-selected studies were found complete in the databases, or searched through Google Scholar, or, even, on the website of the journal. In the aftermath, they were organized into tables/charts of the Word®, after identification and exclusion of duplicate articles; later, data extraction was performed for the construction of a matrix with the individual specifications of the works. The matrix was composed of the 33 articles selected after reading the material in full and systematized from the following items: title, journal in which it was published, year of publication, authors and professional category of the first author, objective, methodology, main results, conclusions and observations of the researchers.

It is noteworthy that the entire analysis process was performed by peers, in addition, the final selection of 33 articles underwent double-blind analysis, carried out by researchers of the topic, in order to confer greater scientific rigor and adequacy of the studies found to the objectives of the integrative review.

The analysis of the data was carried out based on the proposal of the Content Thematic Analysis, guided by the steps of pre-analysis, material exploration, treatment and interpretation of results⁷. In the pre-analysis, a floating reading of the complete works was carried out, which allowed to identify general aspects of the matrix such as: types of study (qualitative, quantitative research, mixed method research, case study and integrative review), objectives of the work, periodicals in which the studies were published, year of publication, region of the country in which the study was carried out and professional category of the authors. These elements gave rise to the ‘profile of studies’ category. The exploration of the material took place through new readings of the complete texts, and, in the matrix, a cutting of the main findings/conclusions and the size of the studies was carried out. Subsequently, the aggregation and classification of the data occurred, in order to structure the categories of discussion: ‘origin and theoretical conceptions’ and ‘matrixing in practice’.

It should be emphasized that, due to the complexity of the context surrounding the study object in question, the discussions were not limited to the scope of articles found in the review. Thus, mainly in the ‘origin and theoretical conceptions’ category, resulting from other studies, carried out by important renowned authors in this area of knowledge, as well as guidelines from ministerial documents, were articulated to the debate.

Results

Characteristics of authors and studies

With respect to authorship, the 33 studies were published by 102 authors, of whom 86 individuals were authors or coauthors of only one article, 12 authors or coauthors of two studies and four authors or coauthors of three articles.

With the purpose of identifying more specifically the professional profile of the subjects who write on the NaSF-AB theme, a search of the curricula of the first author of each work on the Lattes Platform was carried out. The data showed that most authors (86.7%) have a professional relationship in public health or education institutions, the others work in private educational institutions (10%) or with foreign entities (3.3%). As for the professional activity, 15 are professors of the higher education sector and/or technical education sector and/or health researchers, seven are students of master’s degree, doctorate or multiprofessional residence in health, five act in the assistance or management of health in public context or private and three are professionals working at NaSF-AB. It should be noted that no professional information was found from the authors of two papers and, also, that the same scholar of the topic is the first author of two articles.

The results show that the authors who
study Nasf-AB, for the most part, have a public link in higher education institutions. A small number of individuals working professionally in Nasf-AB as the main author of the studies is noted. This fact, while pointing out the need for a greater number of productions coming from the practical field, reflects the interest of some professionals in presenting the work done with and in the Centers to the scientific milieu.

Regarding the type of study, 31 were characterized as original surveys and two are reviews of literature. Regarding the approach, 24 studies were identified by the authors as qualitative and two quantitative studies, one of which assumed the use of the mixed approach (quanti-qualitative) and the others (n=6) did not specify the approach.

**Origin and theoretical conceptions**

The idea of matrixing that directs the performance of Nasf-AB went through a long path of construction before being incorporated as a methodological resource in a public health policy. Soon after the creation of the SUS, some researchers in the area began to describe in their studies that health production in the context of AB demanded other knowledge, in addition to the technical-scientific contribution of general practitioners of eSF, incorporating centers of specific knowledge.

In order to subsidize adjustments in this direction, Campos and collaborators have stoned the Paideia theoretical and methodological conception. The authors report that this conceptual network has the objective of supporting the co-management of collectives in AB to work in networks, having functionality from three axes of application: institutional support, matrix support and extended and shared clinic.

The Paideia Formation and Support Methodology proposes to understand and interfere in the issues of power sharing, knowledge and affection in collective spaces. Thus, the three axes represent strategies for politics and management to operate with power (institutional support); pedagogy, with knowledge (matrix support); and the subjective clinic, based on the affection of the meetings (extended clinic). In the organization of health processes, these three disciplinary dimensions seem to be fragmented, when in reality they should act simultaneously to establish a solid base of co-management, through dialogic relations and sharing of knowledge and practices.

The triad proposed by the Paideia Methodology can be understood as a way to construct conditions for constant dialogic reflections, from different people and conceptions of the world, capable of stimulating the qualification of the processes in the scope of health care. Such a method aims at increasing the ability to understand and intervention of individuals in a given context, reflecting on others and on themselves, with a view to democracy and social well-being.

In the review of the literature, recent studies demonstrate that the concepts of the Paideia Methodology are being gradually inserted into SUS policies and programs, among them Nasf-AB. In order to broaden the scope, scope and resolubility of actions of the AB, the MH adopted matrix support as a functional center of the Nuclei and established as a working principle the production of health through the use of the extended clinic.

Authors point out that, in the international level, the practice of sharing actions has been gaining ground since the 1990s. Movements in the United Kingdom, Ireland, Australia, Canada and Spain, with different nomenclatures and different operating modes, present synergy in proposing new modes of health production that embrace the principles of matrix support. In Brazil, the municipality of Campinas, in São Paulo, was the first to use the matrix support Method in the 1990s. At the time, it was perceived that such support would be pertinent to qualify the attention, especially in the area of mental health, starting to be implemented by the initiative of the own professionals of the SUS network. In the same decade, other Brazilian states also
began to incorporate the concepts of matrix support, seeking greater interprofessionality in health organization.

It is recognized that, although they have no direct relationship with Nasf-AB, since it was proposed in ministerial terms only in 2008, the aforementioned initiatives, both national and foreign, represent the principle of concepts that theoretically support the Centers; embryonic processes for the construction of what is currently proposed by the MH.

The integrative review\(^{12-14}\) and ministerial documents\(^{1,3,4}\) indicate that the work process of Nasf-AB is based on the sharing of responsibilities with eSF. The Nasf-AB teams seek to integrate into the AB/FHS by forming a knowledge network and complementing the actions of the eSF, based on assumptions such as integrality, interprofessionalism, multidisciplinarity, shared care, co-management, co-responsibility and extended clinical practice.

Thus, the work process of the Nasf-AB is guided by two sets of activities: technical-pedagogical, with the purpose of promoting permanent education with the professionals of the FHS; and clinical-assistance, when demanded care for specific cases\(^4\), either for one or a collective of individuals. The first activities are focused on the support of the teams in the mediation of the demands of the users and their own demands, and the clinical-assistance activities must be carried out in conjunction with the eSF, sharing knowledge and collectively producing knowledge, including with users.

The conception of center and field of knowledge appears in the studies as the operating center of Nasf\(^{8,12,14}\). The nucleus of knowledge is composed of the specific knowledge that determines the identity of a profession, such as the specific clinical attributions of nursing, nutrition, psychology, medicine, among others. The field of knowledge represents a space of knowledge common to all professions, which stand out for the specialties of each category\(^8\). Thus, it is possible to understand that the matrix support of the Nasf acts in the logic of complementing knowledge and experiences of a nucleus of specialized knowledge for a multidisciplinary field – that of collective health – which, in this case, is represented by the eSF.

Based on this theoretical input, Nasf-AB teams have been developing since 2008 an important role in the reorganization of health care practices and, currently, total 3.797 that are part of the health care network of SUS throughout the national territory\(^{14}\).

**Matrixing in practice**

There is consensus in the literature that the main function of the Nasf is to assist/support the eSF through matrix support. However, there is little guidance on how Nasf-AB practitioners should operate in practical daily life, whether in individual or collective clinical care, or in technical and pedagogical support. It is possible to observe in the manuscripts\(^{15-42}\) that the matrix support is understood in different ways by the teams of the Nuclei, as well as by the eSFs and managers.

The overall analysis of the manuscripts\(^{16,21,23,28,34}\) points to the absence of more precise ministerial information on the way of acting of Nasf-AB. In addition, the researcher\(^5\) of the area also mentions that the maturation performed by Nasf-AB is not well defined, which opened a precedent for the polarization of the discussions in this area, with some researchers/managers of the area arguing that the matrixing of the Centers has been depleted in the technical-pedagogical support, while others argue that clinical-assistance support is also part of the Nasf-AB assignments.

The set of articles that composed the review indicates the realization of matrix support in three different ways: predominantly clinical-care, predominantly technical-pedagogical, and, more sparingly, through the union of the two previous practices.

‘Clinical-care support’ was detailed in some studies\(^{15,20,24,27,31,32}\) as the main activity demanded and performed by Nasf-AB.
professionals. These researches affirm that the support realized by the Centers is centered in attendances, generally, individual, under pediatric demand, with healing characteristics and of rehabilitation.

The collective activities of Nasf-AB, carried out with a focus on health promotion and disease prevention, totalize a small number of actions when compared to individual care. Moreover, in most cases, they occur in a fragmented way, with a prescriptive character and from the centers of knowledge of a single profession\textsuperscript{15,17,20}, characterizing a health practice with little proximity to that proposed in the theoretical framework that guides the performance of the Nasf-AB.

In relation to ‘technical-pedagogical support’, a study\textsuperscript{21} conducted with psychologists from Ceará showed that they practice, predominantly, matrix support by guiding their actions in the assistance, support and guidance to eSF and through intersectoral partnerships. Together with the FHS, Nasf-AB learns the reality of a given territory and the most frequent problems, in order to direct its actions based on the demand of generalist teams – eSF\textsuperscript{35,41,42}.

In studies conducted in the Northeast\textsuperscript{25}, South\textsuperscript{26,30}, Southeast\textsuperscript{29} and Central-West regions\textsuperscript{37} it was also possible to perceive the matrix support as an effective strategy: as it shares knowledge, promotes interdisciplinarity/intersectoriality and contributes to the elaboration of Singular Therapeutic Plans (PTS), through the use of different areas of knowledge in order to support AB services. This process makes it possible to provide comprehensive services to the collectives in their territories\textsuperscript{9,34}.

The realization of matrixing from the simultaneous exercise of clinical assistance and technical and pedagogical support appeared in some studies\textsuperscript{37,21,25,28,33,40} as a natural and recurrent practice of the Nasf, in order to meet what is recommended by the official regulations for Nasf\textsuperscript{44}. Given this, it can be perceived that the way in which matrix support is carried out is, often, due to the very maturity of the professionals who make up the Centers, the workers of the eSF and the managers.

Researchers\textsuperscript{20,26,39} argue that the way in which the activities of the centers should develop is present in the ideals of professionals and is defended, ideologically, by them, however, it is little applied in practice. This reality may be related to the reduced number of Nasf-AB teams, the demand for assistance from users, with the wide territory assigned and the primacy of the biomedical and curativist model\textsuperscript{26,39,40}.

In studies\textsuperscript{16,32} carried out in two municipalities in the Northeast region, it was possible to observe that the initiative to define specialized care as the main strategy of matrixing to the eSFs did not originate from the Nasf-AB team, but by direct orientation of municipal management or coordination of services, in response to the great demand of the population for specialized care.

Other research carried out in the Northeastern region\textsuperscript{40}, South\textsuperscript{26,41} and Southeast\textsuperscript{36} point out the lack of understanding on the part of the management and eSF regarding the actual functions of Nasf-AB, which can result in the restriction of the activities of these professionals to individual care and resistance and few integration between supporter and eSF\textsuperscript{19,26,31}. Psychology professionals, for example, reveal difficulties related to the demarcation of their specific role in Nasf-AB and the need for greater time in the eSF, weekly\textsuperscript{21}.

There was an expressive amount of manuscripts that criticized the privilege given to clinical-care support, mainly through the individual care, in Nasf-AB\textsuperscript{16,20,26,32,36}. In other studies\textsuperscript{27,28} this is justified, also, because of the demand of the community for individual care.

In the selected studies, there is little information on the application of PTS and other collective practices between Family Health/FHS and Nasf-AB, which suggests the lack of production of shared therapeutic knowledge and itineraries, the undervaluation of
joint planning meetings, the overvaluation of centered technical knowledge and the preference for individual care under the pathological demand. In this way, the logic of referrals is maintained, which escapes the precepts of interdisciplinarity, co-responsibility and shared service of the nucleus, as well as weakens the model provoked by the implementation of work in RAS.

It is relevant to mention that the matrix support, resulting from a specialized care initiative (with an assistance focus), does not constitute an obstacle to be overcome by the Nasf-AB team, precisely, because it composes its arsenal of attributes. It is necessary that the specialized care be redefined, having its operationalization in agreement with its theoretical presuppositions and with commitment of the professionals of the Centers, the eSF and the management. Clinical-care support is inherent to the performance of the Nasf-AB, however, it should be articulated to other strategies, such as technical-pedagogical support, because, if carried out in an isolated manner, it is unable to guarantee the objectives presented by the program.

Studies show that such perspective has been adopted by the work of the Centers in some regions, in which workers seek to meet the demand of users and collectivities in an integral way, promote the understanding of the subjects (managers, FHS professionals and users) about the actions developed by Nasf-AB.

The experiences of the Northeast demonstrate that, despite the difficulties in sharing activities between Nasf-AB and FHS, it was possible to perform Nasf-AB care practices based on home visits, preventive activities and health promotion, with articulation of social services, joint care and collective interventions.

It is observed that the difficulties for the execution of the work of Nasf-AB are mainly related to the realization of the distant matura-
tion of the reality of each territory, with the creation of links between FHS and Nasf-AB, with the lack of understanding about how the program operates, with the scarcity of inputs (lack of computers, failures in internet access, printer, car, driver, among others) and inadequate quantification of professionals.

In addition, the way Nasf-AB operates also has to do with the training processes of the professionals who make up the team. In researches carried out with professionals of speech therapy and with the multiprofessional team of Nasf-AB, it was noticed that the training aspects of professionals influence the quality of care. It was noted that from the reformulation of National Curricular Guidelines for health courses, professionals emerged with a more interdisciplinary and expanded view on collective health.

The analysis of the literature also allows us to argue that, regardless of how teams develop matrixing, the contributions of Nasf-AB are configured as a device for change, which instigates professional rethinking, strengthening of ties and co-participation and co-responsibility in the scope of AB.

In addition, it has been noted in studies that the perspective of some professionals of the Centers is that, in the future, the eSF are structured in the Nasf-AB logic, with a greater incorporation of theoretical references guiding this policy, which point to actions of integral, collective care and for the promotion of health and prevention of diseases and illnesses.

**Final considerations**

Although the logic of Nasf-AB requires a broader perception of health care practices and, often, challenges practitioners for a performance that goes beyond centralized and curative medical care, the literature demonstrates that this strategy of support/care shared with the eSF has been, gradually, incorporated and valued by workers of the AB.

The studies show that the Centers has been guiding its activities in technical-pedagogical activities, with the focus on the matrix support to eSF, and clinical-care, aimed at individuals and collectives. The matrix support is
understood in different ways by professionals of Nasf-AB, FHS and managers, according to their maturity and conceptions about what is matrixing. The shortage of more precise ministerial information on how teams should act and the lack of permanent and continuing education strategies can be considered aggravating in this process.

The discourse on how the activities should be developed is present in the ideology of the professionals, but the practices of health care show that there is a considerable distance between knowing and doing. Thus, the clinical-care support of the Nasf-AB is developed based on the demands of the population for specialized care, as opposed to the guideline to serve as support, offering shared care, expanded clinical practice, performing co-management and sharing responsibilities with the eSF.

Nasf-AB is recognized as a change device that promotes professional rethinking, regardless of how teams develop their care practices, because it favors the establishment of bonds and participation in everyday actions of health care (longitudinality), as well as implying in the resolubility of the AB. However, it is necessary to strike a balance between clinical-care and technical-pedagogical practices that have guided the work of the professionals of Nasf-AB, in order to prevent this team from absorbing and masking the problems of lack of solvency of the AB, emerging as a new device with palliative resolutions, which does not focus on the effective strengthening of generalists.

The integrative review, as a method of choice for the development of the present study, favored the construction of a panorama of the performance of the Centers, despite the limit of the selection of a single term for the search of the studies and the method itself, which did not capture all universe of studies on the subject. Nevertheless, the research contributes to the understanding of the ways of acting of the Nasf-AB, favoring reflection on the importance of the incorporation of educational and solidarity methodologies and practices to advance in the resolutivity of care in AB.

Collaborators

Maffissoni AL, Silva KJ, Vendruscolo C, Trindade LL and Metelski FK contributed to the elaboration of the proposals and objectives, conception and planning of timetables of the study, literature analysis and interpretation of bibliographic data, drafting and critical review of content and final approval of the manuscript.
References


40. Macedo MAV, Ximenes-Guimarães JM, Sampaio JJC, et al. Análise do processo de trabalho no núcleo de...
Matrix role of the Primary Care Extended Centers: an integrative review of the literature


Received on 03/19/2018
Approved on 10/10/2018
Conflict of interests: non-existent
Financial support: non-existent