

Marcus Valerius da Silva Peixoto¹ 
Sônia Cristina Lima Chaves² 

Analysis of the national hearing health care policy implementation in a Brazilian State

Análise da implantação da política nacional de atenção à saúde auditiva em uma unidade federativa do Brasil

Keywords

Healthcare Policy
Health Evaluation
Healthcare
Audiology
Public Health
Speech-Language Therapy

Descritores

Política de Saúde
Avaliação em Saúde
Serviços de Saúde
Audiologia
Saúde Pública
Fonoaudiologia

Correspondence address:

Marcus Valerius da Silva Peixoto
Departamento de Fonoaudiologia,
Universidade Federal de Sergipe
Avenida Marechal Rondon, s/n, São
Cristóvão (SE), Brasil CEP: 49100-000.
E-mail: peixotovalerius@gmail.com

Received: May 17, 2018.

Accepted: October 30, 2018.

ABSTRACT

Purpose: The present study aimed to analyze the degree of implementation of the national health care policy at the state level. **Methods:** This qualitative evaluation study was carried out in two stages. Firstly, the policy was modelled by means of document analysis and the application of the Delphi technique for consensus among experts. In the second stage, a qualitative, exploratory evaluative research was conducted, designed as a single case study in a Brazilian state through semi-structured interviews with health managers. **Results:** The experts reached a consensus for a logical model and an evaluation matrix of the policy implementation. The results at the state level evinced an incipient degree of implementation, as the level of *government characteristics* achieved 45% of the maximum score; *management*, 41%; and *system organization*, 33%. **Conclusion:** The degree of implementation in the state evaluated was classified as incipient. Barriers were identified in the management and organization levels of the system, as well as in the political context.

RESUMO

Objetivo: O presente estudo objetivou analisar o grau de implantação da política nacional de atenção à saúde auditiva no âmbito estadual. **Método:** Foi realizado um estudo avaliativo qualitativo dividido em duas etapas. Na primeira etapa, foi realizada a modelização da política com uma análise documental e aplicação da técnica *Delphi* de consenso de *experts*. Na segunda etapa, foi realizada uma pesquisa avaliativa do tipo qualitativa, exploratória, delineada em um estudo de caso único em uma unidade federativa do Brasil mediante entrevistas semiestruturadas com gestores da saúde. **Resultados:** Foi obtido o consenso de um modelo lógico e uma matriz de avaliação da implantação da política entre os *experts*. Os resultados no âmbito Estadual evidenciaram o grau de implantação incipiente, com o nível das *características de governo* com 45% da pontuação máxima, a *gestão* com 41% e o nível da *organização do sistema* com 33%. **Conclusão:** O Estado avaliado obteve o grau incipiente de implantação, com obstáculos identificados nos níveis de gestão, organização do sistema e contexto político.

Study conducted at Instituto de Saúde Coletiva, Universidade Federal da Bahia, Salvador (BA), Brasil.

¹ Departamento de Fonoaudiologia, Universidade Federal de Sergipe – UFS - São Cristóvão (SE), Brasil.

² Instituto de Saúde Coletiva, Universidade Federal da Bahia – UFBA, Salvador (BA), Brasil.

Financial support: nothing to declare.

Conflict of interests: nothing to declare.



This is an Open Access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

The lack of identification and intervention for hearing impairment may compromise the development of language, speech, and cognitive skills of the persons with these disabilities, as well as their behavior. According to the World Health Organization (WHO), about half of the hearing-related conditions can be prevented by actions undertaken in primary care-aimed for prevention and early detection—and their damage can be reduced by means of treatment and rehabilitation⁽¹⁾.

The creation of the Brazilian Unified Health System (SUS) was highly significant for the understanding health care as a citizen's right; however, specific measures to improve access and integral care for persons with disabilities did not follow immediately⁽²⁾.

Historically, Brazil devises health policies for people with disabilities that are focused and fragmented, which favors services centralized exclusively on individuals, focused on the distribution of hearing aids, a practice that is inconsistent with the principles of SUS⁽³⁻⁶⁾.

The National Hearing Health Care Policy (NHHCP) [Política Nacional de Atenção à Saúde Auditiva], which provides for the implementation of State Hearing Health Care Networks in all Brazilian states, was published in 2004⁽⁷⁾. It is known that interventions for hearing health may be prioritized and implemented according to decisions based on evidence, cost-effectiveness analyses, and an understanding of the program's framework⁽⁸⁾.

In the scientific field, most of the evaluation studies focused on health care for the hearing impaired concern users' satisfaction and adherence to the practices. These studies aim for the results of health care actions, failing to reflect the processes by which these results are achieved^(3,9-11).

On the other hand, it is known that strategies for health evaluation may draw upon the field of political analysis with a view to reflect the need for a care model that goes beyond spontaneous demand, centered around individual care⁽¹²⁾. Health practices can be evaluated as to their several dimensions, from individual care to their more complex intervention and organizational conditions, such as policies, programs, services or systems⁽¹³⁾.

Implementation analysis studies propose to better determine the factors facilitating or compromising implementation of an intervention and are largely prone to generalization compared to other types of evaluative research. Therefore, they aim to explain the difference between what had been planned and what has actually been implemented^(14,15).

The methodological constructs of some research studies have presented strategies to evaluate and analyze implantation of health policies and programs. At different extents, they seek to select dimensions, sub-dimensions, and criteria related to the different domains of health care models, with particular attention to management, assistance, and effectiveness of the practices based on the understanding of the programs' theory/logic model^(16,17).

The study on the implementation of NHHCP's actions is part of the effort undertaken by researchers in the field of Speech-Language Therapy and Public Health to develop

evaluative research that reflects the multiple aspects involved in the implementation processes of health care policies, programs, and services. The NHHCP is structured as a guideline proposing the formation of networks within states, which may or not respond to the situation called by the policy. In this vein, it is important to understand the context in which the actions of health care provision are put in place. Research studies such as these may help to identify the barriers and drivers for management and implementation of hearing health interventions at the state level.

Thus, the present study aimed to analyze the degree of implementation of the national health care policy at the state level.

METHODS

Study design

The study was performed in two stages: The first one consisted in a methodological research modeling of an intervention that produced the NHHCP framework expressed in its theory/logic model and its matrix of evaluation criteria/measures, which have been agreed upon by experts in the field by means of the Delphi technique⁽¹⁸⁾. The second stage consisted in a qualitative, exploratory evaluative research designed around a single case study in a Brazilian state.

Procedures and data production techniques

Framework (Logic Model and Matrix of Measures)

For the construction of the logic model, a document analysis was performed in the Brazilian healthcare legislation present in the following Ordinances: GM/MS no. 2073, of September 2004, which instituted the national hearing health care policy and SAS/MS no. 587, of October 7, 2004, which determined that the State Health Departments in operation in 2004 take the necessary measures to organize and implement the State Hearing Health Care Networks. The first Policy Logic Model (Figure 1) construct was created and consisted in *components, objectives, actions, intermediate and final results*, and the *matrix of measures*, which was divided hierarchically by *levels, dimensions, sub-dimensions, and criteria* (Chart 1).

In order to apply the Delphi technique, the matrix of the first construct was sent electronically as a questionnaire to experts in Speech-Language Therapy. The inclusion criteria for experts were: specialized in Audiology or Collective Health, from different regions of the country, acting in the hearing health care area in the SUS network (at a federal, state, or city level) or as an academic researcher in the field of hearing health care evaluation. A total of 14 experts were invited, but only 7 answered to the request. All participants were informed about the development of the NHHCP consensus and the possibilities of score assignment to maintain the matrix criteria on a scale of 0 (less relevant) to 10 (most relevant), in addition to being informed that they could suggest modifications or new criteria to compose the matrix. Two rounds of interviews were conducted to confirm agreement upon the matrix.

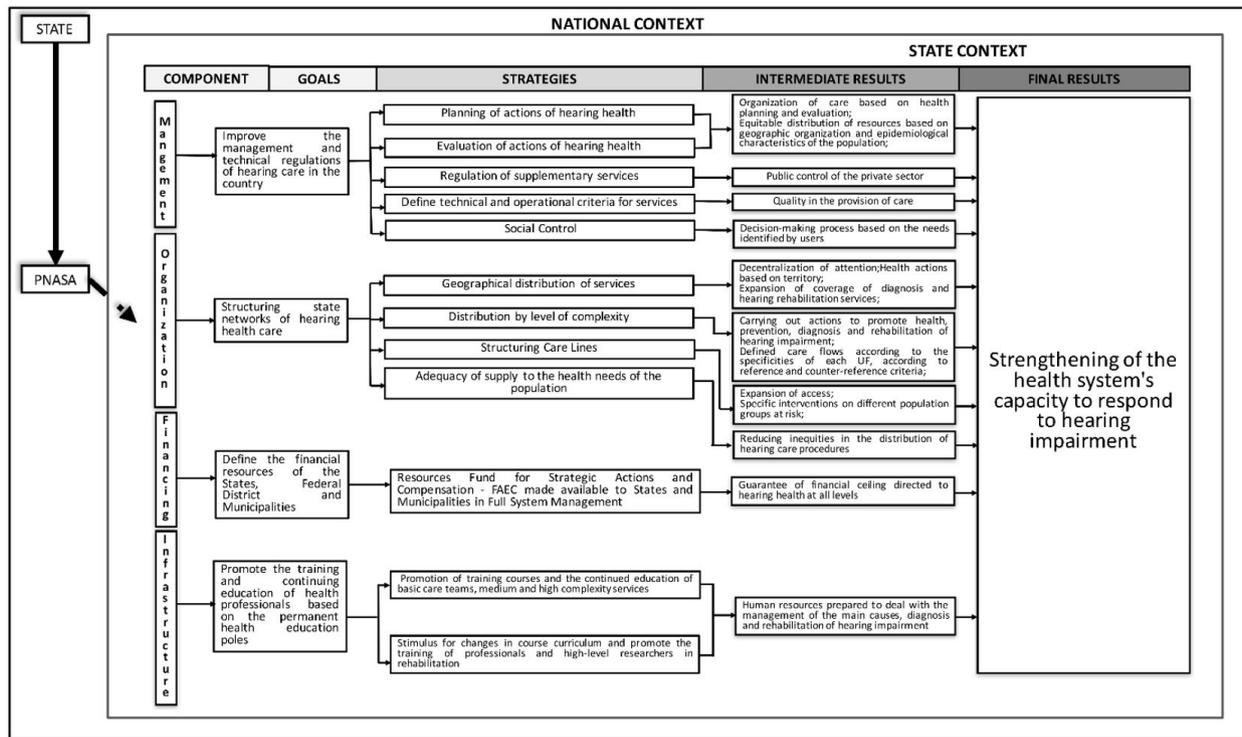


Figure 1. Theory / Logic Model of the National Policy on Hearing Health Care (NHHCP)

Chart 1. The NHHPC measures matrix resulting from the Delphi consensus technique – Analysis of the NHHPC degree of implementation at the state level

Levels / Dimensions / Sub-dimensions	Criteria	Score obtained	% of total points
<i>Management Level</i>			
Planning (16pts)		6	37.5
The Hearing Rehabilitation Plan is described in the state health plan and is applied as a management tool; (8pts)	a) The Hearing Rehabilitation Plan is described in the state health plan and is applied as a management tool; (8pts) b) The Plan is not described in any of the documents analyzed, but it is applied as a management tool at the technical level of the department and service managers; (6pts) c) The Hearing Rehabilitation Plan is described in the state health plan, but does not apply as a management tool; (4pts) d) The plan is not described in any of the documents and does not apply as a management tool at any level of the health department; (2pts)	4	50
Participation of users, workers, providers and managers in planning; (8 pts)	a) Participation of users, workers, providers and managers in planning; (8 pts) b) Planning is devised by the State Health Department's technical staff and endorsed by the Health Council; (6pts) c) Participation is limited to service providers and the State Health Department's technical staff; (4pts) d) The planning is devised only by the State Health Department's technical staff; (2pts)	2	25
Evaluation (24pts)		10	41.6
There are evaluation and monitoring processes for the network and services in place, which take into account the structure, processes, and results of the actions; (8pts)	a) There are evaluation and monitoring processes for the network and services in place, which take into account the structure, processes, and results of the actions; (8pts) b) Evaluation practices are performed by the services themselves, regardless of the State Health Department's management; (6pts) c) Service supervision in practice; (4pts) d) Evaluation is not performed; (2pts)	4	50
Existence of studies evaluating the efficiency and quality of the state network; (8pts)	a) There are cost-effectiveness and quality assessment processes for actions with the incorporation of programmatic activities; (8pts) b) The hearing healthcare services regularly monitor the users alongside primary care in order to verify treatment adherence and identify the unmet demand; (6pts) c) The hearing healthcare services regularly monitor the users detached from primary care in order to verify treatment adherence (4pts) d) The services are organized only according to the SUS table; (2pts)	2	25

Chart 1. Continued...

Levels / Dimensions / Sub-dimensions	Criteria	Score obtained	% of total points
<i>Management Level</i>			
Use and improvement of information system to monitor actions for hearing impairment (8pts);	a) Use and improvement of information system to monitor hearing impairment; (8pts) b) A system proposed by a unit provider for the self- assessment is in place; (6pts) c) Services use information systems only for production recording purposes; (4pts) d) No use of health information systems; (2pts)	4	50
Regulation of Services (16pts)		10	62.5
Procedures are regulated by a public regulation center; (8pts)	a) All procedures are regulated by a public regulation center; (8pts) b) Only the high complex procedures are regulated; (6pts) c) Double access to services of medium and high complexity: by regulation and spontaneous demand; (4pts) d) There is no regulation in place for hearing health services; (2pts)	4	50
Existence of a technical control and auditing group provided with a speech-language therapist and that regularly operates in the network; (8pts)	a) Existence of a technical control and auditing group provided with a speech-language therapist and that regularly operates in the network; (8pts) b) There is a technical control and auditing group that regularly operates in the network, but without a speech-language therapist; (6pts) c) Control and audit are performed occasionally; (4pts) d) Control and auditing are not performed at all; (2pts)	6	75
Technical and operational capacity of the services (8pts)		4	50
All of the high and medium complexity services claim to meet the minimum requirements of Ordinance no. 587/2004 with regard to human resources, facilities, and equipment; (8pts)	a) All of the high and medium complexity services meet the minimum requirements of Ordinance no. 587/2004 with regard to human resources, facilities, and equipment; (8pts) b) 75% of the high and medium complexity services meet the minimum requirements of Ordinance no. 587/2004 with regard to human resources, facilities, and equipment; (6pts) c) 50% of the high and medium complexity services meet the minimum requirements of Ordinance no. 587/2004 with regard to human resources, facilities, and equipment; (4pts) d) 25% of the high and medium complexity services meet the minimum requirements of Ordinance no. 587/2004 with regard to human resources, facilities, and equipment; (2pts)	4	50
Social control and popular participation (8pts)		2	25
Existence of a mechanism such as a managing council for hearing health that includes users and workers; (8pts)	a) There is a mechanism such as a managing council in place for hearing health that includes users and workers; (4pts) b) The services have promoted mechanisms to allow for the participation of users and workers; (4pts) c) There is no incentive to popular participation and social control; (2pts) d) Criterion A + Criterion B; (8 pts)	2	25
System Organization Level			
Hearing health care regionalization (26pts)		8	30.7
Existence of speech-language therapists in the basic care network acting towards promotion, prevention, identification, and monitoring of cases; (10pts)	a) Existence of speech-language therapists in the basic care network acting towards promotion, prevention, identification, and monitoring of cases; (6pts) b) The State Health Department, together with the medium and high complexity service, offers training for HFS to prevent, identify and monitor cases of hearing impairment; (4pts) c) The basic care flows are disseminated across municipalities; (4pts) d) There are no actions in place involving basic care in hearing health; (2pts) e) Criteria (A + B) or Criteria (A + C); (10pts)	2	25
The State Health Department, alongside the medium and high complexity service, trains FHS to prevent, identify, and monitor cases of hearing impairment; (8pts)	a) Technical-pedagogical actions aimed at basic care teams are devised to prevent, identify and monitor cases of hearing impairment; (8pts) b) Technical-pedagogical actions aimed at basic care teams are devised to prevent, identify cases of hearing impairment; (6pts) c) Regional forums operate in raising awareness of family health teams on the subject; (4pts) d) There are no technical-pedagogical actions related to the subject; (2pts)	4	40

Chart 1. Continued...

Levels / Dimensions / Sub-dimensions	Criteria	Score obtained	% of total points
<i>Management Level</i>			
Distribution and implantation of services are based on epidemiological data and the historical series of health care services; (8pts)	a) Distribution and implantation of services are based on epidemiological data and the historical series of health care services in the regions serviced; (8pts) b) Distribution and implantation of services are based on epidemiological data of health care services in the regions serviced; (6pts) c) Distribution and implantation of services are based on the historical series of health care services in the regions serviced; (6pts) d) Distribution of services is based on self-reported hearing loss estimates (like the Census); (4pts) e) Distribution of services is based on ease of deployment and opportunity; (2pts)	2	25
Structuring of lines of care (8pts)		4	50
Structuring of a hearing care line for hearing impairment with actions planned at all the levels of care based on a therapeutic project with risk and priority rating;	a) Structuring of a hearing care line for hearing impairment with actions planned at all the levels of care based on a therapeutic project with risk and priority rating; (8pts) b) It develops actions at all levels; however, it does not clearly constitute a line of care; (6pts) c) Existence of ambulatory logic by spontaneous demand based on the hegemonic medical model; (4pts) d) Absence of established and publicized flows for the reference services; (2pts)	4	50
Adequacy of supply to the needs (8pts)		2	25
Availability of procedures is based on epidemiological data and the historical series of health care services; (8pts)	a) Availability of the procedures is based on epidemiological data and the historical series of care of the regions serviced; (8pts) b) Availability of procedures is based on epidemiological data of the regions serviced; (6pts) c) Availability of procedures is based on the historical series of health care services provided to the regions; (6pts) d) Procedures are offered without clear parameters for distribution in the state network; (2pts)	2	25
<i>Political Context Level</i>			
Government Project (16pts)		8	50
Government Purpose. A proposal for inter-sectoral action aimed at people with hearing impairment is in place and involves sectors such as education and social assistance; (8pts)	a) Hearing Health Care is explicit in the government plan; (4pts) b) The government plan is coherent with the actions for hearing health care; (4pts) c) There are no proposals beyond federal ordinances; (2pts) d) Criterion A + Criterion B. (8pts)	4	50
The State grants resources for innovative proposals in addition to the ones granted by the Ministry of Health; (8pts)	a) The State grants resources for innovative proposals in addition to the ones granted by the Ministry of Health; (8pts) b) The State grants resources to complement the actions predicted by the ordinances in addition to the ones granted by the Ministry of Health; (6pts) c) The State grants resources in addition to the ones granted by the Ministry of Health; (4pts)	4	50
Governability (8pts)		4	50
Autonomy of the Health Department to enforce the policy according to the pacts with the actors involved; (8pts)	a) Autonomy of the Health Department to enforce the policy according to the pacts with the actors involved; (8pts) b) Enforcement and distribution of the policy's resources in the state is based on opportunity and ease; (4pts) c) Distribution of resources is strictly based on federal ordinances; (4pts)	4	50
Ability to govern (16pts)		6	37.5
A technical group is appointed to manage hearing health care with the participation of speech-language therapists; (8pts)	a) A technical group is appointed to manage hearing health care; (4pts) b) A speech-language therapist takes part in the technical management group; (4pts) c) Management of hearing health care related to technical areas not specifically aimed at persons with disabilities; (2pts) d) Criterion A + Criterion B; (8pts)	4	50
Management team trained in collective health; (8pts)	a) Management team with professionals trained in collective health; (8pts) b) Management team with professionals trained in the area of human rights / social service; (6pts) c) Management team with career professionals in public management; (4pts) d) Management team with professionals trained in the area of rehabilitation; (2pts).	2	25
TOTAL		64	41

A Brazilian state with approximately 3 million inhabitants was selected, from which a document research of the State Health Plan and Annual Management Reports pertaining to the period between the years of 2008 and 2011 was carried out⁽¹⁹⁾. Five individual semi-structured interviews were conducted with key informants in the central sphere of the State Department of Health, responsible for implementing the policy (the State Secretary of Health and the coordinator of the technical area of care for persons with disabilities) and managing the three services composing the State Hearing Health Care Network.

Data analysis

The analysis of the Delphi consensus technique was carried out through the calculation of central tendency and dispersion. The criteria were considered as (a) very important upon a mean score of > 9; (b) important, upon a mean score of > 8 and < 9; (c) slightly important, upon a mean score of < 8. As to the degree of consensus, criteria were considered to have (a) a high degree of consensus with standard deviation < 1; (b) a medium degree of consensus, > 1 and < 2; (c) a low degree of consensus, > 2 and < 3; and dissention, > 3. Only the criteria considered as very important, important, with a high degree, and with a medium degree of consensus were included in the final matrix.

The policy implementation evaluation used the thematic content analysis technique⁽²⁰⁾, based on the matrix of criteria and measures resulting from NHHCP’s framework. The interviews were transcribed and aggregated to the document analysis data. These were processed for identification of the confluence and divergence points of the actors/documents on the actions developed at the *management, organizational and political* levels within the state sphere.

Following the treatment of evidences, scores (8, 6, 4 or 2) were assigned to the criteria according to the comparison with the matrix of measures/criteria of NHHCP’s framework. The implementation degree was calculated by the ratio between the scores obtained for each criterion, dimension or level and their respective maximum scores multiplied by 100.

$$Final\ Score = \frac{Score\ Obtained}{Maximum\ Score} \tag{1}$$

Score Obtained = Σ of the score obtained in each criterion, dimension or level

Maximum Score = Σ of the maximum score in each criterion, dimension or level

The degree of implementation was classified into four categories according to the final score: not implanted, < 25; incipient, > 25 and < 50; intermediate, > 50 and < 75; and advanced, > 75. The score was assigned by the researcher who conducted the study and, in order to validate the degree of implementation more rigorously, an external researcher was invited to assign his own score according to the evidence collected. Afterwards, the scores were compared and, in the face of disagreements, a third researcher was invited to facilitate a consensus.

Ethical aspects

The study complied with the National Research Ethics Committee norms, in accordance with resolution number 466/2012, which provides guidelines and regulatory norms for human research, and was submitted to, and approved by, the Research Ethics Committee of Instituto de Saúde Coletiva da Universidade Federal da Bahia [Collective Health Institute of Universidade Federal da Bahia] under protocol no. 07/2012.

The participation of the subjects interviewed was voluntary and took place following agreement to, and signing of, the Informed Consent Form.

RESULTS

The logic model and the matrix of measures proposed as NHHCP’s framework were evaluated by the experts, who considered most of the criteria as very important or important, having presented a high degree of consensus (Table 1).

From the implementation analysis at the state level, it was observed that none of the dimensions obtained a score corresponding to an advanced degree of implementation (Figure 2). Rather, an incipient degree of implementation of the NHHCP at the state level was evinced considering the level scores separately and the sum of all levels in relation to the total score (41.5%) (Chart 1).

Table 1. Criteria analyzed by NHHCP experts according to the degree of consensus and importance

Classification of scores	Management				Organization				Political Context				Total			
	Round 1		Round 2		Round 1		Round 2		Round 1		Round 2		Round 1		Round 2	
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Importance (Mean)																
Very Important > 9	9	81.8	10	90.9	3	37.5	5	62.5	4	57.1	5	62.5	16	61.5	20	74.0
Important > 8 and < 9	2	18.1	1	9.0	3	37.5	2	25.0	2	28.5	1	12.5	7	26.9	4	14.8
Slightly Important < 8	0	0.0	0	0.0	2	25.0	1	12.5	1	14.2	2	25.0	3	11.5	3	11.1
Total	11	100	11	100	8	100	8	100	7	100	8	100	26	100	27	100
Consensus (DP)																
High degree < 1	5	45.4	6	54.5	1	12.5	4	50.0	4	57.1	5	62.5	10	38.4	15	55.5
Consensus > 1 and < 2	5	45.4	5	45.4	3	37.5	2	25.0	1	14.2	1	12.5	10	38.4	8	29.6
Low degree > 2 and < 3	1	9.09	0	0.0	3	37.5	1	12.5	0	0.0	0	0.0	3	11.5	1	3.7
Dissensus > 3	0	0.0	0	0.0	1	12.5	1	12.5	2	28.5	2	25	3	11.5	3	11.1
Total	11	100	11	100	8	100	8	100	7	100	8	100	26	100	27	100

DISCUSSION

The NHHCP Management

At the management level, the planning dimension presented a low degree of implementation, considering that hearing health care is mentioned in the state health plan⁽¹⁹⁾. The 2009 annual management report⁽¹⁹⁾ describes the construction of the state plan for health care of *disabled persons* as an achieved goal [emphasis added: refers to the “persons with disabilities”]⁽¹⁹⁾. However, the interviews show that planning does not apply as a management tool, as can be observed in some narratives:

[...] *In our case, as the management, we play a role in monitoring, monitoring of this network, although we don't determine how it should work. It [management] knows how to work as per the ordinance [...] We supervise to make sure the duties are fulfilled. But our planning, as management, as the State, involves the organization of reviews, visits [...] (Technical Area Manager).*

When asked if he can remember any planning situation: “No, I can't.” (Manager of Provider A).

There is no planning, you can't get consistency from this question, because there isn't any planning. We follow the ordinance. It is about the ordinance, period. We follow all of the procedures and SUS supervises us [...] (Manager of Provider B).

I think it is not fully planned. I think that things... In fact, it is not at all planned. I think that things happen and, as this develops, things get done [...] (Manager of Provider C).

The sub-dimension of *participatory planning* was assigned the degree of “not implemented”, since this practice is operated only by the technical staff of the State Health Department, at the bureaucratic sphere, according to the following reports:

Planning begins in management, goes through the board, and moves on to the superintendence, which is immediately above the board. From there, it goes to the secretary's office to be signed. For approval [...] It [planning] is really more related to the technical group [...] Here and there, the health councils take part. [...] (Technical Area Manager)

[...] *We work as per the ordinances, but we seldom have meetings—only when it is necessary. (Manager of Provider B)*

Sometimes, they call us, but not the users. There are few moments of meetings.[...] If it exists, I do not know it. (Manager of Provider C)”

However, it is known that planning is necessary for a better deployment of collective, social, and institutional actions with shared responsibilities. Planning helps to mobilize will, and to identify problems and the means to solve them. It elevates people's health consciousness, fostering political interest in health care. Furthermore, when socialized, planning allows

the large number of employees in the institutions to focus their work on explicit intentions⁽²¹⁾.

In the *evaluation dimension*, the merely supervisory role of the state management was clearly observed. According to the narratives, the regulatory character of the state concerning the population's health becomes apparent:

We evaluate the physical infrastructure, medical records, and the number of patients seen, both for consultations and examinations, as well as the distribution of prostheses, in the case of hearing care. So all this is evaluated in order to verify if it complies with what is expected from that institution compared to the resources it receives, right? [...] We grant the resources, but we evaluate if that resource is used well [...] (Technical Area Manager)

[...] *The state is an inductor, an organizer of the system, it supervises it, but the real policy-makers are the municipalities [...] (State Secretary of Health).*

[...] *It is always in the sense of checking if you are really doing what you pledged, if you are performing exams. It is much more about punishment, about looking for something to try and discredit the service, than about conducting an evaluation to find out if the service needs help with something (Manager of Provider C).*

The 2008⁽¹⁹⁾ management report indicates the supervision of the rehabilitation network and partner entities services for care to persons with disabilities, pointing out that, out of 32 planned supervisions, 16 were actually performed. The 2009⁽¹⁹⁾ management report set the goal of undertaking 50 visits and performed 48—it should be noted that these are not exclusively dedicated to hearing health services. As evaluation is carried out from a supervisory and regulatory perspective, no evaluation concerning the quality of the services was observed. This criterion obtained a score compatible with an incipient degree of implementation.

In the *decision-making* sub-dimension, it was observed that the network does not have information systems to support the evaluation and decision-making process, although one of the services within the direct administration developed a software for this purpose that was made available to the state network. According to the data collected, a low degree of implementation was assigned.

As shown in Figure 2, the service regulation dimension was the one presenting the highest score—the only one considered as intermediate, with 62.5% of the maximum score. The attribution of this disparate score in the state is justified by recurrent narratives referring to the presence of audits, rather than by the regulation of procedures as, despite the existence of a regulatory complex, many users still have access to high complexity care upon spontaneous demand.

Yes, the state carries out audits. Monthly. Even in order to grant the hearing aids. Hearing aids require an “approver”—we call them “approvers”, the people that come here and whose work allows us to make these procedures (Manager of Provider A).

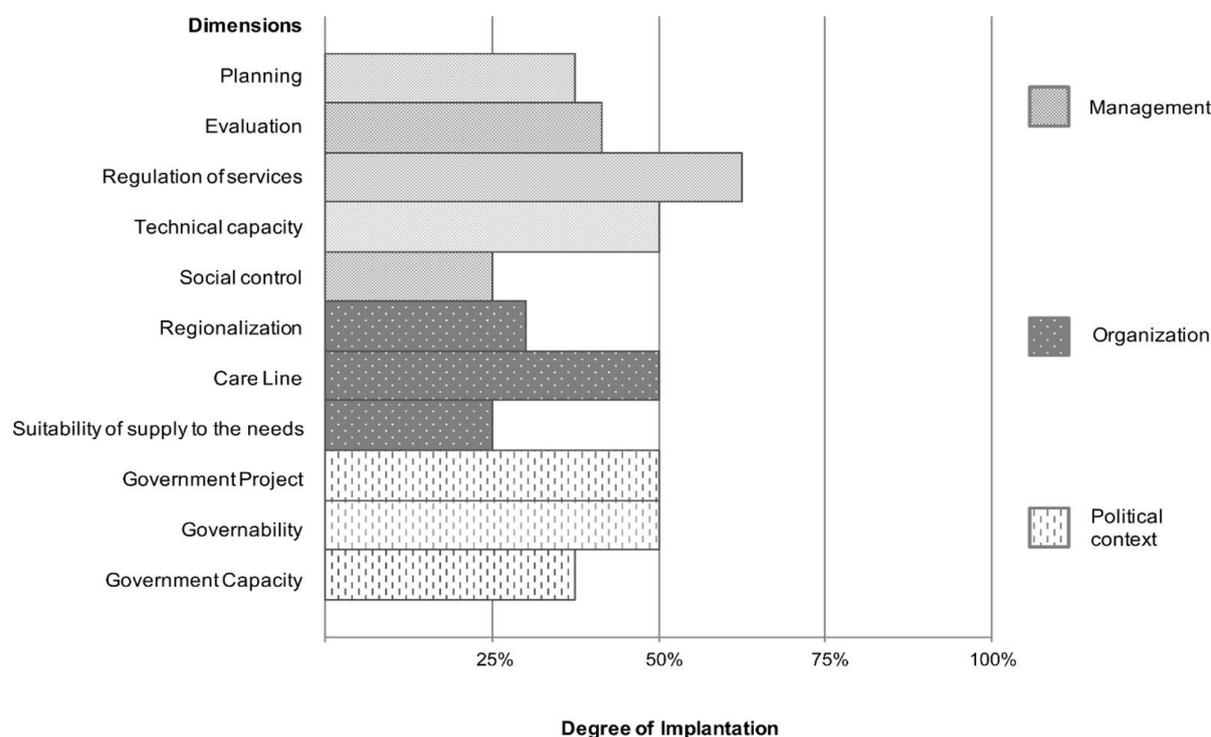


Figure 2. Degree of implementation of the NHHCP analyzed at the state level per dimensions

[...] We call them “approving doctors”. They come, look at the medical records, check if the patient was tested, if they received the device, and if they are being followed up [...] (Manager of Provider B).

[...] 90% of the service use is spontaneous. People hear in the media, and from us, that we operate in the entire state, that we have units. So, we disseminate this service a lot (Manager of Provider B).

In spite of the importance of the speech-language therapist for control and audit, as most of the procedures fall under their competence, the presence of this professional was not observed in the accomplishment of this activity.

System organization

The *system organization* level received the lowest score. A more in-depth analysis per dimension determined that implantation of *hearing health care regionalization* was incipient. According to the narratives of the individuals interviewed, actions in primary care have not been properly undertaken:

[...] They (patients) are assessed in a FHP (Family Health Program) [PSF – Programa de Saúde Familiar], for instance, and diagnosed with hearing impairment. If the doctor or the FHP team were aware of these services, they’d refer these patients. Nowadays, this doesn’t work (Technical Area Manager).

[...] Today, this articulation is very poor [...] Preventive care hasn’t been effectively provided in the basic units (Manager of Provider B).

The continuing education and training actions aimed towards primary care for prevention, identification, and monitoring of hearing impairment cases were considered incipient. This is justified by the existence of a few particular actions, such as the “Hearing Health Day” seminary, noted in the annual report management of 2008⁽¹⁹⁾, as well as the holding of seminars and workshops aimed at the rehabilitation network teams in the state. In addition, it is known that training per se does not ensure incorporation of these practices in the primary care work process.

Primary health care favors the regionalization of health actions. Although the NHHCP proposes strategies for the promotion, prevention, early identification, and monitoring of hearing impairment, there are still specificities that, to some extent, require the presence of a speech-language therapist to follow-up these actions. However, complying with the strictly normative ordinances does not provide for the intersection of policies, but rather a shift from rehabilitation to specialized attention alone. Close follow-up of the user by a speech-language therapist may represent an important measure to reduce cost-effectiveness^(8,22).

With regard to the distribution and implantation of services and procedures, it was observed that they occur according to ease of implantation and population size. The services are overcrowded in the two most populous cities, which are macro-regions headquarters of health care; however, the distribution of services is also not based on epidemiological data and historical series of procedures performed for their distribution. This may lead to the results observed in another study, which found evidences of inequity of access by the public^(4,6).

The *lines of care* dimension were analyzed based on the understanding that this is the flow mechanism the user must

follow from access to the health service to follow-up of the hearing impairment. However, it was evinced that this dimension is an important barrier because there are no well-defined flows nor a line of health care dedicated to hearing. The logic of service to spontaneous demand predominates—i.e. it overlaps the organization based on referral and counter-referral started in primary care. It is believed that the use of care management techniques can increase the degree of implementation of the system organization dimension and strengthen the policy, improving health outcomes for users, as well as contributing to managers' decision-making⁽²³⁾.

The lines of care are constituted according to the user and their health needs and imply organizational devices that continuously call for dialogue and commitment among caregivers and managers of the different health units in order to enforce a responsible and transversal coordination of the actions with the aim of ensuring integrity, resolution, and efficiency of care^(24,25).

Articulating actions to promote health, prevention, early detection, and diagnosis of disabilities is a challenge to be faced and demonstrates the fragility of policies aimed at persons with disabilities⁽²⁶⁾.

Political context

The political context was analyzed in its dimensions of *government project*, *governability* and *ability to govern*. Although all dimensions of this level obtained scores compatible with an incipient degree of implementation, this level was the one with the highest score compared with the others⁽²⁷⁾.

The *government project* aims to reveal the purpose of the government team and pointed to a fragility of the NHHCP as a state policy. Apparently, it is bound in a strictly normative manner to the legislation and ordinances, adjusted to the rationality of scarcity and the regulatory character of the State, as observed in the report by the State Secretary of Health, in which the problem of hearing impairment apparently is not a priority:

[...] In small municipalities, there is not enough volume to justify the creation of specific local policies. So, it stops, so to speak. Are you going to set up a small town school to benefit the deaf and the mute? For which population? What you'll find is small municipalities that lack teachers qualified for this. So it is not a matter of wanting to do it. Rather: Is it possible? [...] There are many barriers hindering the creation of public policies aimed at this. Imagine having a teacher talking to everyone in each classroom with a person next to them translating into sign language. It is virtually ... Not virtually-it is actually impossible to do that. It is difficult to contemplate these people. Surely, there are other difficulties in living with this on a daily basis that only they know (State Secretary of Health).

According to the managers of these services, the only prospect is Administrative Ordinance 793 of the Ministry of Health, published on April 24, 2012, which establishes the Network of Care for Persons with Disabilities, corroborating the NHHCP implementation. At the state level, there is a

predominantly normative orientation and there is no coherent government project for the NHHCP implementation process. The managers reported the following when asked about the outlook for the policy:

[...] The only proposal we have today is the implementation of this network, this new service model. (When asked if the policy is one of the government's priorities): No, it is not. Because in this state, auditory health policy [...] it is not a specific policy. It is circumscribed within the state policy for people with disabilities, in the health care context. So, everyone is included in this... But everyone is together. We don't have a well-defined policy here yet. There are only the ordinances, according to which the services are provided (Manager of Provider A).

[...] The proposals are the new ordinances from the Ministry of Health; there's nothing other than this (Manager of Provider B).

[...] I don't see any different prospects. I see a sort of stagnation since the last ordinance [...] For a while, we still saw an attempt to, for instance, establish a neonatal screening network. It goes like this: Nobody dies of deafness. Thus, the priority is always around more urgent matters, so to speak (Manager of Provider C).

Finally, in the *government project dimension*, the *financing* criterion was investigated in order to analyze if the State is involved and plays a role, especially in other actions beyond what the ordinance establishes. However, it was observed that the State Health Department grants resources by means of an agreement with a single hearing evaluation mobile unit.

The *governability dimension* achieved an incipient degree of implementation. It was analyzed in terms of the autonomy of the Health Department to grant resources. According to the evidence collected from the hearing health care managers in the state, there is a great submission to the ordinance's requirements, including financing bound to productivity of procedures. In addition, funds are granted exclusively to the mobile unit and a few training actions. With regard to investments in material and human resources, no evidence was found. Moreover, two of the three high complexity service providers are outsourced, which places the State in the position of supervisor, as observed in the *evaluation* and *regulation dimensions*. When asked about the decision-making process, the technical area manager informs that decisions move from the technical area to senior management for final approval, as follows:

[...] Decision-making is based on approval from the top: the board, the superintendence, and the Secretary of Health. In other words, we either identify a problem or create a solution for improvement. This needs to go through the top management. In this case, the decision goes from my management to the board, from the board to the superintendent's opinion, and from him to the Secretary. The idea is put forward upon approval (Technical Area Manager).

Lastly, the *ability to govern dimension* reveals the capacity and expertise of the team with regard to technical knowledge and ability to enforce the policy. The existence of the technical area that provides follow-up care to persons with disabilities was notorious. However, the team does not include a speech-language therapist, which led us to classify the criterion as in an incipient degree of implementation, given the need for specific speech-language therapy, which can contribute greatly to the management and organization of the system to support the NHHCP implementation with greater technical-scientific backing.

The analysis of the second criterion showed that a policy of this magnitude also depends on the technical-scientific knowledge on collective health. None of the technical managers has been trained in the field of public health, although all of them are career public servants, which also allowed the criterion to be classified within an incipient degree of implementation.

The analysis of government characteristics reveals fragility in the NHHCP implementation context, which can cause variations on other characteristics of a program⁽¹⁴⁾. This study reinforced the interrelation between the governance characteristics, expression of political practice, management, and practices for health services⁽²⁸⁾. These evidences were also pointed out in previous studies of analysis of health policy implementation in Brazil⁽²⁹⁾.

Apparently, decision-making has little to do with health information and produces few changes in terms of the reversal of the care model focused on individual care.

Proposing a health policy aimed at integrality points to the challenge of creating institutional tools that facilitate the distribution of *technical*, *administrative* and *political* power towards changing the organization technologies of the intervention and assuring the articulation with other sectors in order to ensure policies turned towards quality of life⁽¹²⁾.

The right of access to health care of persons with disabilities points to the need for normative guidelines to go beyond the limits of institutional spaces in order to impact people's lives. The ordinances should not be the end; rather, they should guide the possible means to change the current health care situation.

The normative instruments were the only ones that did not reflect the implementation of a public policy according to SUS precepts or the population's health needs. In this way, this reality can be perpetuated if the importance of the interaction among political, management, organizational, and technical-assistance practices is not taken into consideration with a view to distribute power across institutions and thus meet the needs of those at whom the policy is aimed.

Limitations and advances

One limitation of this study is the non-inclusion of users as participants in the production of research data, since the predominant focus has been the evaluation of processes—in particular, the analysis of the implementation of actions with a large volume of data at the management level. However, we encourage future studies that may address the aspects of structures and results, as well as triangular documentary, observational, and interview data.

The advances consist in the application of an evaluative research method capable of identifying relevant gaps in the implementation process of NHHCP and that contributes a different perspective to field researchers by adding information beyond the productivity of the offer of procedures and the satisfaction of the users, typical of assessment results.

CONCLUSION

The article proposed a theory-logic evaluative model that can be used to evaluate the degree of implementation of actions for hearing health care. It has shown that the Policy holds an incipient degree of implementation in the State evaluated, having identified obstacles in the scope of management, organization of the system, and the political context.

ACKNOWLEDGEMENTS

We are thankful for the support of the Institute of Collective Health of UFBA.

REFERENCES

1. WHO: World Health Organization [Internet]. Deafness and hearing loss. Switzerland: WHO; 2019 [cited 2014 Feb 16]. Available from: <http://www.who.int/mediacentre/factsheets/fs300/en/>
2. Peixoto MVS, Santos GS, Nobre GRD, Novais APS, Reis PM. Análise da participação popular na política de atenção à saúde da pessoa com deficiência em Aracaju, Sergipe, Brasil. *Interface - Comun Saúde. Educ.* 2018;23:28-40. <http://dx.doi.org/10.1590/1807-57622017.0230>.
3. Jardim DS, Maciel FJ, Piastrelli MT, Lemos SMA. Atenção à saúde auditiva: percepção dos usuários de um serviço público. *CoDAS.* 2017;29(2):1-7. <http://dx.doi.org/10.1590/2317-1782/20172015259>. PMID:28380199.
4. Silva LSG, Gonçalves CGO, Soares VMN. National Policy on Health Care Hearing: an evaluative study from covering services and diagnostic procedures. *CoDAS.* 2014;26(3):241-7. <http://dx.doi.org/10.1590/2317-1782/201420140440>. PMID:25118922.
5. Rezende CF, Carvalho SA, Maciel FJ, Oliveira R No, Pereira DV, Lemos SM. Hearing health network: a spatial analysis. *Rev Bras Otorrinolaringol.* 2015;81(3):232-9. <http://dx.doi.org/10.1016/j.bjorl.2014.01.003>. PMID:25382426.
6. Vieira G, Castro AMB, Morettin ZM, Pereira MTB. Saúde auditiva no Brasil: análise quantitativa do período de vigência da Política Nacional de Atenção à Saúde Auditiva. *Distúrb Comun.* 2015;27:725-40.
7. Brasil. Ministério da Saúde. Portaria nº 2073, de 28 de setembro de 2004. Institui a Política Nacional de Atenção à Saúde Auditiva. [Internet]. Diário Oficial da União; Brasília; 2004 [citado 2014 Jan 29]. Disponível em: http://bvsms.saude.gov.br/bvs/saudelegis/sas/2004/prt2073_28_09_2004_rep.html
8. Whitson HE, Lin FR. Hearing and vision care for older adults: sensing a need to update Medicare policy. *JAMA.* 2014;312(17):1739-40. <http://dx.doi.org/10.1001/jama.2014.13535>. PMID:25369486.
9. Silva DPCB, Silva VB, Aurélio FS. Auditory satisfaction of patients fitted with hearing aids in the Brazilian Public Health Service and benefits offered by the hearing aids. *Rev Bras Otorrinolaringol.* 2013;79(5):538-45. <http://dx.doi.org/10.5935/1808-8694.20130098>. PMID:24141666.
10. Bacchetti MSE, Akiyama R, Ferreira BR, Samelli GA. Indicadores de qualidade para serviços de audiologia. *ACR.* 2013;18(4):268-4. <http://dx.doi.org/10.1590/S2317-64312013000400007>.
11. Cunha JT, Massi G, Guarinello AC, Pereira FM. A percepção dos usuários de um Centro de Atendimento vinculado ao SUS: enfoque fonoaudiológico baseado na promoção da saúde. *CoDAS.* 2016;28(4):417-28. <http://dx.doi.org/10.1590/2317-1782/20162015066>. PMID:27556826.

12. Paim J, Vieira-da-Silva LM. Desafios e possibilidades de práticas avaliativas de sistemas universais e integrais de saúde. In: Pinheiro R, Mattos R. Gestão em redes práticas avaliação, formação e participação na saúde. Rio de Janeiro: UERJ/ABRASCO; 2006, p. 91-111.
13. Lígia Maria V-S. Avaliação de políticas e programas de saúde. Rio de Janeiro: Fiocruz; 2014.
14. Champagne F, Brousselle A, Hartz Z, Contandriopoulos A, Denis JL. Análise da Implantação. In: Contandriopoulos A, Denis JL, Champagne F, Hartz Z, editors. Avaliação Conceitos e Métodos. Rio de Janeiro: Fiocruz; 2011, p. 217-238.
15. Ritchie MJ, Kirchner JE, Parker LE, Curran GM, Fortney JC, Pitcock JA, et al. Evaluation of an implementation facilitation strategy for settings that experience significant implementation barriers. *Implement Sci.* 2015;10(S1):A46. <http://dx.doi.org/10.1186/1748-5908-10-S1-A46>.
16. Vieira-da-Silva LM, Esperidião MA, Viana SV, Alves VS, Lemos DVDS, Caputo MC, et al. Avaliação da implantação de programa voltado para melhoria da acessibilidade e humanização do acolhimento aos usuários na rede básica. Salvador, 2005-2008. *Rev Bras Saúde Mater Infant.* 2010;10(Suppl 1):131-43. <http://dx.doi.org/10.1590/S1519-38292010000500012>.
17. Souza MF, Vanderlei LCM, Frias PG, Souza MF, Vanderlei LC, Frias PG. Avaliação da implantação do Programa de Controle da Hanseníase em Camaragibe, Pernambuco. *Epidemiol Serv Saude.* 2017;26(4):817-34. <http://dx.doi.org/10.5123/S1679-49742017000400013>. PMID:29211145.
18. Jones J, Hunter D. Using the Delphi and nominal group technique in health services research. In: Pope C, Mays N, editors. *Qualitative research in health care.* London: BMJ Books; 2000, p. 40-9.
19. Alagoas. Governo do Estado de Alagoas. Secretaria de Estado da Saúde [Internet]. Acesso à Informação. Ações e Programas. Maceió: SESAU; 2012 [citado January 25, 2014]. Available from: <http://www.saude.al.gov.br/aceso-a-informacao/>.
20. Atkinson JA, Page A, Wells R, Milat A, Wilson A. A modelling tool for policy analysis to support the design of efficient and effective policy responses for complex public health problems. *Implement Sci.* 2015;10(1):1-9. <http://dx.doi.org/10.1186/s13012-015-0221-5>. PMID:25889919.
21. Paim JS, Minayo MCS, Akerman M, Drumond M Jr, Carvalho YM. Tratado de saúde coletiva. *Saúde Debate.* 2006;170:767-82.
22. Vianna NG, Cavalcanti MLT, Acioli MD. Princípios de universalidade, integralidade e equidade em um serviço de atenção à saúde auditiva. *Cien Saude Colet.* 2014;19(7):2179-88. <http://dx.doi.org/10.1590/1413-81232014197.09392013>. PMID:25014297.
23. Holtrop JS, Potworowski G, Fitzpatrick L, Kowalk A, Green LA. Understanding effective care management implementation in primary care: a macrocognition perspective analysis. *Implement Sci.* 2015;10(1):122. <http://dx.doi.org/10.1186/s13012-015-0316-z>. PMID:26292670.
24. Malta DC, Merhy EE. O percurso da linha do cuidado sob a perspectiva das doenças crônicas não transmissíveis. *Interface - Comun Saúde Educ.* 2010;14:593-606. <http://dx.doi.org/10.1590/S1414-32832010005000010>.
25. Maciel FJ, Januário GC, Alvarenga CMH, Campos E, Silva MA, Silva SA, et al. Indicadores de saúde auditiva em Minas Gerais : um estudo por macrorregião. *Audiol Commun Res.* 2013;18(4):275-84. <http://dx.doi.org/10.1590/S2317-64312013000400008>.
26. Pereira S, Maior I, Pinto I. Integralidade como eixo de atenção à saúde da pessoa com deficiência. In: Silvia P, Isabel M, Isabela P. Política públicas e pessoa com deficiência: direitos humanos, família e saúde. 1st ed. Salvador: EDUFBA; 2011, p. 198.
27. Matus C. Política, planejamento e governo. 2nd ed. Brasília: IPEA; 1993.
28. Naude CE, Zani B, Ongolo-Zogo P, Wiysonge CS, Dudley L, Kredt T, et al. Research evidence and policy: qualitative study in selected provinces in South Africa and Cameroon. *Implement Sci.* 2015;10(1):126. <http://dx.doi.org/10.1186/s13012-015-0315-0>. PMID:26334760.
29. Vieira-da-silva LM, Hartz ZM, Chave SC, Silva GA, Paim JS. Análise da implantação da gestão descentralizada em saúde : estudo comparado de cinco casos na Bahia, Brasil The implementation of decentralized health systems : a comparative study of fi ve cases in Bahia, Brazil. *Cad Saude Publica.* 2007;23(2):355-70. <http://dx.doi.org/10.1590/S0102-311X2007000200012>. PMID:17221085.

Authors contributions

The authors MVSP and SCLC collaborated on all stages of the research—planning, execution, data analysis, discussion of results, and final editing of the manuscript.