Participative research and comprehensive child healthcare promotion strategies in the Brazilian National Health System (SUS)

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The article discusses methodological aspects of an investigation aimed at promoting the involvement of participants as a challenge. We were interested in understanding how family health teams made sense of the child handbook - Caderneta de Saúde da Criança, and child development. The intervention-research promoted the sharing of viewpoints among researchers and providers in focal groups with the use of narratives making it possible for the participants to become key players of the proposed investigation. The implementation of the strategy promoted: 1) the greater ownership of the instrument, 2) the deepening and repositioning regarding crystalized issues in the functioning of teams, and 3 ) the validation of research results. These results indicate that there is a contribution of participatory research to the consolidation of SUS because they propose access to a common plan as methodological strategy and promote greater engagement of the teams in relation to the proposed themes.


Introduction

In this article, we discuss methodological aspects of a research entitled “Understanding the professional discourse about the practice of monitoring child growth and development in the Family Health Strategy” (2014), which aimed to investigate what causes the low rate of completion of the Caderneta de Saúde da Criança (CSC - Child Health Handbook)1 and to understand teams’ conceptions
of comprehensive healthcare in childhood. Inquiries into these themes became important during a study carried out in 2013 with mothers who use the services of Brazil’s National Healthcare System (SUS) to follow up their children’s health. Firstly, a low rate of completion of the CSC by Primary Care professionals was found, corroborating the literature\(^2^4\). Another finding suggested that the professionals did not give much importance to aspects of the CSC targeted at the promotion of child development\(^5^6\). The hypothesis of professionals’ lack of familiarity with the CSC and with aspects related to child development motivated the conduction of a participatory research with teams of the Family Health Strategy.

The participation guideline established by the SUS\(^7^8\) represents a benchmark for the inclusion of the population in the making and control of health policies\(^9\). Thus, it has become a commitment that must pervade all health actions, from management\(^10\) to the clinic\(^11\). It is a principle grounded on the recognition that the person who is the target of a care action is the protagonist of his/her own history\(^12\), being, therefore, the co-author of health production\(^13\).

Thus, health work has two purposes for professionals, managers and users\(^12\): health production and a joint construction of the capacity for reflection and autonomy. We understand autonomy as a resource that needs to be constantly (re)constructed in the midst of intersubjective relations. Consequently, the degrees of autonomy that can be experienced are related to the functioning of healthcare organizations and the values that circulate there, and also to the culture in which one is inserted. It is considered that autonomy increases as the network of dependencies of each individual, as well as the ways of dealing with it, become larger and more diversified\(^14^15\). Recognizing the importance of the active participation of research actors\(^16^17\), we adopted a research design in which the effects of intervention - always inevitable\(^18\) – contribute to increase the knowledge, critical capacity and resources to foster the autonomous action of SUS professionals, managers and users. This research modality seek coherent answers to questions imposed by “the spheres of life that cannot be studied by the classic deductive way (empirical test of previous theories)”\(^19\) (p. 1270).

The theoretical framework included authors from the field of Collective Health who think about healthcare based on different epistemological matrices but, despite their differences, take into account the intersubjective or relational aspect of healthcare, emphasizing that the processes of management and clinic are influenced by elements that range from power relations to the dimension of desire and existential questions. We selected works that value aspects of the services’ daily routine and have firmly criticized the limits of the biomedical paradigm, highlighting the importance of amplified approaches to care that are grounded not only on biological and social aspects, but also on cultural, emotional and/or psychological aspects\(^12,13,17,18,20\).

**Intervention research and its challenges in the context of comprehensive childcare**

The CSC is a strategic instrument to follow up the health of children who are born in Brazil. After undergoing successive changes in order to approach the comprehensiveness of care in childhood, its
The final version was concluded in 2010. It is an instrument to be used by mothers and health professionals, especially in Primary Care, which is responsible for longitudinal care.

Despite the importance of the CSC’s role to the promotion of children’s health, recommended by a series of policies that aim to ensure children’s rights, the experience of its utilization has been the object of few studies. Which actors use the CSC? What do they understand they can do with it? What difficulties do they face? How can they amplify its possibilities of use? The approach to such questions must be further explored based on methodological designs that include participants as the protagonists of the knowledge production process.

The utilization of participatory methodologies can contribute significantly to the field of studies related to childcare. However, what is viewed as participation and the procedures taken to promote it can vary a lot. In view of the variety present in the field, it is necessary to explain what we understand as participation in this study.

We adopted the theoretical framework of intervention research to understand the subject-object problem in the research field. According to Aguiar and Rocha, although included among participatory studies, intervention research, based mainly on the French institutionalist thought and on schizoanalysis, establishes a deeper rupture with traditional research approaches and with notions of subject grounded either on the centrality of conscience or on social determination. It promotes a process of denaturalization of the daily routine that it investigates (a health service or practice, for example), and focuses on aspects that emerge “(...) in situations that resist models, in what, after successive repetitions, tensions beliefs, values, the logic that guides routine.” (p. 537). “In this perspective, researching is, above all, an attitude that questions men and facts in their constitution processes, bringing, to the field of analysis, stories, the transitional and partial character, the selection of aspects of the practices that the investigation makes” (p. 654) and the effects that it produces, both on the groups that one intended to investigate and on the researchers.

Thus, producing knowledge implies, necessarily, intervening on what one intends to know. The reality is not a datum that is ready, finished, waiting for someone (the researcher) to unveil its meaning. Both the phenomenon that the person intends to know (that is traditionally referred to as the research object) and the person who knows it are undergoing an uninterrupted process of joint construction, because getting to know something is an act that produces, simultaneously, the one who knows (subject) and the one that is known (object). Researcher and participant are heterogeneous viewpoints that share the process of knowledge production.

In this sense, it is said that the research “gathers” data, as knowledge is produced in/by the very process of researching. It is not a process of extracting information from the field (collection procedure) to represent a world that was established a priori; rather, it is a process of participating in its creation and transformation.

Participants
To understand how the teams get familiarized with the CSC, we conducted focus groups with professionals of the Family Health Strategy. Two meetings were held with each participant team and each meeting lasted two hours on average. The Table of Participants presents the distribution of the participants according to their professional category and city.

Table 1. Table of participants

<table>
<thead>
<tr>
<th>City</th>
<th>Community Health Agent</th>
<th>Nurse Technician</th>
<th>Nurse</th>
<th>Physician</th>
<th>Dentist</th>
<th>Dental Assistant</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joinville (Southern Brazil)</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>11</td>
</tr>
<tr>
<td>Santarém (Northern Brazil)</td>
<td>8</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Campina Grande (Northeastern Brazil)</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>São Gonçalo (Southeastern Brazil)</td>
<td>6</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>41</td>
</tr>
</tbody>
</table>

The study was approved by the Ethics Committee (opinion no. 745,856) and authorized by the municipal health departments of the cities in which the fieldwork was developed. All the participants signed a consent document.

Focus Groups (FG)

Traditionally, the focus group (FG) technique is a data collection tool used in isolation or jointly with others. It aims to promote interaction within a group to favor the exchange of opinions, perceptions and knowledge, and to amplify perspectives about a certain theme. Its advantage is that it enables to observe the emergence of new viewpoints that derive from the group process itself and cannot be reduced to the sum of individual perspectives. Through its use, a higher number of people is reached simultaneously, and a certain degree of depth is obtained in a short period of time. In the area of Collective Health, numerous studies have used it to evaluate the implementation of policies, services and experiences, as it enables to recognize not only what people think, but also their motivations and the processes through which they formulate their arguments, face controversies, create consensuses and position themselves in intersubjective dynamics. However, despite their wide utilization, few publications have discussed methodological issues related to the focus group, especially regarding the

\(^{(g)}\) Did not participate in the second meeting.
\(^{(h)}\) Did not participate in the second meeting.
analysis of data obtained by means of this technique. This is precisely what the present article proposes to present.

In the first meeting, the focus of the discussion was guided by a thematic script composed of three axes: 1) Care practices targeted at childhood; 2) Forms of utilization of the CSC; 3) Education in comprehensive childcare. Although the script contained questions that had been previously formulated, they were raised in the discussion respecting the group dynamics. The moderator’s task consisted of guiding the group so that it investigated its own experience, in a non-directive way, helping with the proliferation of points of view and inviting the group to try a certain detachment from what is naturalized.

The literature related to the use of the FG technique indicates homogeneity as a favorable condition to its utilization, as it facilitates the drawing of reflections and questionings in the group. In this study, we decided to conduct groups with complete Family Health teams, and the homogeneity criterion that we adopted was that the participants had to belong to the same Family Health team. Therefore, it was a type of homogeneity that encompassed the heterogeneity of professional categories and functions. With this, we aimed to reproduce, in the research instruments, a situation that is analogous to what the professionals of the Family Health teams undergo, in which distinct experiences and educational backgrounds engage in health production.

The study was guided by a triple inclusion whose effect was the lateralization between professionals-researchers and university researchers: 1) inclusion of different actors implicated in the health production process - circle time with the Family Health professionals and university researchers; 2) inclusion of the crucial issues raised by the circle time experience - collective production of issues for analysis in the research or data gathering; 3) inclusion of the collective protagonism generated by the inclusion procedure itself - contraction of groupality and experience of participation in the knowledge production process.

Construction of narratives

We wrote a narrative related to the experience of each FG according to the specific participant field, totaling four narratives. In the construction of the narratives, we attempted to develop the argumentative nuclei that stood out in the memories that we wrote after the end of the FGs. Methodologically, in this stage there is the work of data systematization, as the data are organized and the researchers unfold their meanings.

It is important to emphasize that the task of constructing the narrative occurs in accordance with a process of analysis that starts during the FG. It is believed that experiences of lateralization since the FG foster the emergence of an analytical ethos shared with the research participants, which enables the creation of new meanings for tacit functionings.

In this sense, this research was different from many studies that use the FG technique and decide to interpret the empirical material employing ethnographic approaches, content analysis or discourse analysis. In our study, we decided to perform a work of construction, reading and discussing the
narratives with the research participants. This decision was based on the presupposition that narratives are never ready inside individuals; they are constructions that derive from a relationship. They always contain marks of the narrators, in addition to those belonging to the actors of the narrated story. This work of construction of narratives is an effect of the negotiation of meanings about the phenomenon that is being studied.

In the entanglements of the discussions, meanings were searched for the three thematic axes that, although intensely lived, had not been narrated yet. With the utilization of narratives, we aimed to create conditions so that researchers and participants could share and interfere mutually in the analyses of the research process, problematizing their own experiences.

Narrative FGs and the construction of a spreadsheet of argumentative nuclei

The narrative focus group (NG) is a second round of FGs in which the narrative constructed by the university researchers is presented to the professionals-researchers and discussed with them. It was the occasion to validate the meanings produced during the research and, mainly, to amplify and deepen the discussions, providing the actors involved with the opportunity to change their stance if they wanted to. Having the promotion of participation as the guiding principle, in the conduction of the NG, the meanings formulated by the university researchers were submitted to the analysis of the other participants. In this new stage, new argumentative nuclei emerged. The nuclei formulated from the FG and those that emerged in the discussion of the NG were organized in a way that enabled the visualization of the effects of the intervention. We provide a line of analysis below:

<table>
<thead>
<tr>
<th>FG</th>
<th>NG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complaint about the fact that the mothers do not read the CSC.</td>
<td>The group states they are not performing any work to encourage the mothers to read the CSC, something that used to be performed by the community health agents during prenatal assistance. (…) The team decides to implement the idea that emerged in the FG of using the CSC in group assistances as a strategy to encourage reading.</td>
</tr>
</tbody>
</table>

In this example, it is possible to see that one of the nuclei that stood out in the first meeting unfolds in the second, amplifying the understanding of the problem that had been presented initially. This amplification, accompanied by estrangements, questionings and discomforts experienced by the participants during the group meetings, indicates that the FG technique can produce effects that extend beyond the obtention of information, which is what is traditionally expected from it. This effect of amplification of the meanings related to a problem derives from an analytical participatory procedure.

Finally, the narratives of the different teams and the discussions in different moments (FG and NG) of the same team are crossed to show differences between groups and also the effects of the intervention.

About the intervention effects derived from the research method that was adopted
During the process, the team of researchers identified results related to the utilization of the CSC and to the effects derived from the method that was adopted. The first of them was the possibility that the professionals (mainly community health agents) had of handling the CSC, seeing, for the first time, the whole set of information contained in it. In addition, the proposal of the research aroused the interest for the themes of the CSC and child development, which seemed submerged in the automatism of daily actions.

The second effect was the fostering of changes in the way some professionals referred to the adult members of the families, especially the mothers. As we will present below, evaluations less centered on moral judgements and more sensitive to the complexity of the issues involved in the daily routine of childcare were constructed.

The third effect is expressed by the fact that, when the professionals talked about the CSC, they could develop and share critical reflections on their own work process, recognizing potentialities, conflicts and problems that had been silenced. A similar result was found in the research team itself: based on the experience of the fieldwork, the researchers ended up changing their stance in relation to their own questions and to the research object, as they revealed a scope and a complexity that had not been considered before.

Each of these effects is analyzed separately below, in an attempt to produce a clear text, but their emergence in the groups was simultaneous and did not occur in a linear chronology. It is important to note that most of the fragments of the narratives quoted here are not identified by professional categories, as they are the product of a collective validation process. Whenever a category presented an argument or a comment, it is highlighted.

The CSC acquires a place in the work scene

All the participant teams stated that they completed the CSC or, in the case of the community health agents, that they used it to check the child’s vaccines and the attendance at childcare consultations. However, the discussions in the groups led the professionals to conclude that, although they handled the CSC, they did not know it completely or, according to a specific group, they did not even think about its function:

Even some of us were not familiarized with the handbook. Perhaps we could encourage the mothers to read it, but we’re under a lot of pressure and we have little time to do things... We became more interested in it after you came here to propose the research. There must be more propaganda, because it has changed a lot. (São Gonçalo Narrative)

It was during the research process that many health agents could leaf through the CSC. Before this, they had had access to it only when they visited the families. In these moments, they read only the
pages that contained the information they had to monitor, which made them identify it as the “vaccine card”. They even named it as such in many occasions.

Comments about the difficult access to the CSC led some professionals to express the discomfort they feel when they realize that Primary Care is not valued in the field of healthcare as a whole. The handbook is viewed as a symbol of this, as the teams do not receive it at the healthcare unit and are not trained to use it. It is important to explain that, as it is a document that belongs to the child and the mother, the CSC is delivered directly to the mother at the moment of childbirth. Feeling practically forgotten, the professionals comment that this neglect negatively affects users, too:

That’s right..., but to us, agents and nurse technician, it’s more difficult. We only leaf through the handbook when we visit a household or when the family goes to the unit. We could never read the entire handbook because we don’t have a copy to study. We only see the one that belongs to the mothers. Thus, when we divide our work as a team, the nurse technician fills in the part related to vaccines and vitamin A and the agents use the handbook to check if the child’s weight and vaccines are up to date. This is what’s left to us! (Campina Grande Narrative)

These reflections and notes show the double potency of the adopted method: the researchers gathered the research data and, at the same time, the teams became more familiarized with the CSC.

Professionals’ critical reflection on the role of caregiver attributed to the children’s relatives

The first references that the professionals made to the mother’s role in the utilization of the CSC were, almost all of them, moral judgments. For example, it was stated that the mothers are negligent or that they only care for their children when they are induced by some other gain, derived from social programs:

If, at home, the mothers only read the part related to weight, height and vaccine, it’s because only these data are asked of them. And we’re not the only ones that ask for these data. Other social programs, such as the Bolsa Família(i), ask for data about vaccines and growth. ... In other situations, we see that the mother doesn’t do the basic chores: she doesn’t clean the house, she doesn’t wash the clothes, she doesn’t cook for her children. She lies down all the time. The condition of child neglect mobilizes us a lot! (Joinville Narrative)

(i) A conditional cash transfer program of the Brazilian government.
However, it was interesting to observe that, during the discussion and mainly after the narratives were read in the NG, when the professionals heard what they had said and when they had contact with the viewpoint of other colleagues, some of them changed their opinion in relation to the mothers’ behavior concerning the handbook and the general care provided for their children. Some of them could become closer to the family’s reality of life and understood issues involved in what they were judging as neglect. Others, in turn, could recognize that they also have responsibility in relation to the mothers’ resistance to read the CSC:

> Even if the mother doesn’t know how to read, there’s always someone at home that can read it to her. But it’s obvious that, for this to occur, our function is to encourage her. (Santarém Narrative)

When they confronted the criticisms they had made to the mothers, some professionals contributed to deepen the analysis, discussing sociocultural and political issues that were not in the script of the FG:

> To some of us, today, it [the handbook] has become more necessary, as some mothers can’t count on the family’s help. In former times, there was greater support when a baby was born in the family. Few mothers come to the service with the child’s father or grandmother, for example. The handbook helps mothers who don’t have anybody to rely on. (São Gonçalo Narrative)

This effect of the professionals changing their opinion in relation to the mother can also contribute to the construction of positive bonds between health workers and users. Sharing the construction of singular therapeutic projects is one of the objectives of the SUS to which this research related.

**Work and research scenes are analyzed through the discussion about the CSC**

The notes above allow us to conclude that, beyond the more concrete effect of having access to the CSC, the use of FGs and the sharing of narratives enabled the professionals to develop a critical analysis of their own work and proposals for qualification. These effects also affected the researchers who, questioned about some values and forms of using the research material, ended up broadening their understanding of the phenomenon under study. We believe that this collaborated, also, with the fulfilment of one of the aims of the work in the field of health: the shared construction of autonomy. The fragment below can be viewed as an indicator that some of these effects of criticism and qualification of the work process demand the unfolding in actions that extend beyond the period in which the research was carried out.
Yes..., perhaps they [the mothers] focus only on the vaccine because we, professionals, are also very concerned about this. That’s right... Maybe this focus on the vaccine confuses us and makes us use the word “card” to refer to the handbook, sometimes. Thinking about this now, we realize that we, community health agents, don’t have the habit of leafing through the “card” together with the mother. We could start doing this in the waiting room, while they wait for the childcare consultation... At home, when they have questions, we instruct them to read the handbook. But, in fact, we have never read it together with the mothers. We can change this... (Campina Grande Narrative)

We observed that the teams could rethink the inclusion of the CSC in the health promotion work conducted with the mothers and started to consider the possibility of using it in different ways from that moment onwards. Another possibility for using the handbook mentioned in the groups was to employ it as an education instrument to the team itself, like in the example below:

[X] states that she realized there is a mismatch in the team regarding the use of the handbook, that she and the nurse are doing many things that the others are not following, and mentions, as an example, the discussion about development. ... Marcia revisits the proposal of an internal workshop. (Memory - Campina Grande NG)

The exercise of the team’s critical stance was also identified in some notes that the professionals made about fragments of the narratives, highlighting misunderstandings on the part of the researchers or issues that needed to be more valued, as we can see in the fragment of the memory about the NG conducted in Campina Grande:

Further on, the reading of the narrative indicates that “what is left” to the community health agents and to the nurse technician is to work with vaccines and weight, as they do not have access to the handbook. This understanding is not valid for both of them, technician and agent. To the technician, according to her understanding and to the team’s, the vaccine is not what is left; it is, in fact, the most important part of her job.

The researchers realized that the research was configured as a relational scene, which builds information and produces effects on all the individuals involved. One example was that the researchers felt obliged to change their stance when they were corrected by the nurse technician, who recalled the importance of the vaccination work, showing the inadequacy of the type of emphasis they had given to the expression “the vaccine is what is left”.
Concerned about the use of other elements of the CSC beyond the possibility of checking vaccines, the researchers ended up treating vaccination as something trivial of the daily routine of care provision, disregarding its importance to the maintenance of the child’s life and health, as well as its function in the organization of work division. Hearing the rectification made by the nurse technician was, therefore, essential to review issues that had already been exhaustively treated in the field of research and ended up being extremely simplified in the process that was developing.

Another important effect that the method produced on the team of researchers was the change in relation to the question that guided the research. The question, initially derived from the results of a previous study, asked the reasons for the low rate of completion of the CSC. However, the dialog with the field showed that this material has uses that exceed the formal limits of its completion. For example, it can be an instrument to mediate the contact among professionals and between them and the mothers, or, paradoxically, an instrument to monitor compliance with instructions about childcare. Thus, live work in the act always extrapolates what is prescribed, as it bears a creative potential20. An example of this can be identified in the fragment below:

I bring to the group two fragments, one from Luíza’s discourse and the other from Ana’s, in which they consider that the handbook record is useful to other professionals, and I ask if the group agrees with these statements. A series of comments start to emerge in the sense of valuing the dialog with other professionals from Primary Care and from other levels of care. ... Then, she starts unfolding other possibilities of dialog based on the use of the handbook: the CSC is an instrument to build a dialog with other professionals, among professionals in the same team and also with the families. (Memory about the second group of Campina Grande)

It is important to admit, however, that extrapolating what is prescribed can also mean reducing the work’s potency, as the statement below illustrates:

Today, we, health professionals, use the handbook to control children’s vaccination. In the opinion of some of us, this is the greatest objective of the handbook. ... Our goals have been these: to monitor the growth chart and the vaccines. (São Gonçalo Narrative)

Restricting the CSC’s potential to use it as an instrument to monitor vaccination, that is, to only one of its possibilities, pervades the teams’ experience in all the fields where the research was carried out. However, the same team that, in the example above, stated its goal is vaccination control, after reading this fragment in the NG, started a process of discussion and, in the end, it wondered: “and the rest?” (Memory about São Gonçalo NG). This questioning attests a process of change in the team’s stance, as it starts to consider that there is a set of other actions related to comprehensive childcare. This change was
an effect of the conduction of the intervention research that enabled the teams to question themselves about their stances.

Final remarks

The discussion about comprehensive childcare practices enabled researchers and professionals to share their points of view. This experience promoted transformations that were twofold. On the one hand, it re-signified the research problem itself. The research was no longer concerned only about the completion of the CSC and started focusing on different forms of using this instrument. On the other hand, the teams reported they changed their perspective regarding the families’ participation in childcare, and created forms of utilization of the handbook that were more adequate to the proposal of comprehensive childcare.

The research was developed so as to build a device that favored the participation of the individuals involved in knowledge construction about the matter approached. If we draw an analogy between the methodology proposed for the study and the problem approached in it, it is possible to state that the challenges related to the promotion of comprehensive childcare also apply to the theme of participation. Learning how to use the CSC implies constructing a type of care in which all the players (different members of the health team and family) are considered important authors. Thus, it is possible to observe a relation of circularity between the methodology and the investigated problem. The promotion of the participation of Family Health teams in comprehensive childcare practices was the issue that, at the same time, motivated the research and defined the methodological challenge imposed.

Participation is a challenge to the consolidation of the SUS. The effects of the change in stance and increase in participation that were described here indicate that participatory research has an important contribution to offer to the consolidation of the SUS as a public health policy.

Collaborators

Júlia Florêncio Carvalho Ramos participated in the discussion of the results, in the writing of the manuscript, and in the review and approval of the article’s final version.

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Maria Virgínia Marques Peixoto participated in the discussion of the results, in the review and in the approval of the article’s final version.

Larissa Costa Mendes participated in the discussion of the results, in the review and in the approval of the article’s final version.

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References


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