DOI: 10.1590/1413-81232015208.18912014

The main characteristics of qualitative studies carried out by doctors in Brazil: a literature review

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Abstract *This paper explores the possibilities of the nutrition-sensitive agriculture approach in the context of the programs and actions towards promoting food and nutrition sovereignty and security in Brazil. To analyze the links between nutrition and agriculture, this paper presents the conceptual framework related to food and nutrition security, and stresses the correlations among concepts, institutional structures and program design in Brazil. Dominant models of food production and consumption are scrutinized in the light of these relationships. This paper also highlights differences amongst different ways to promote nutrition-sensitive agriculture through food-acquisition programs from family farmers, experiences in agro-ecology and bio-fortification programs. In the closing remarks, the paper draws some lessons learned from the Brazilian experience that highlight the advantages of family farming and rapid food production, distribution and consumption cycles in order to promote access to an affordable, diversified and more adequate diet in nutritional terms.*

Key words *Food and nutrition security, Food sovereignty, Agro-ecology, Family farming, Food policies*

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Introduction

The experience of doctors with health care, contact with patients and knowledge of health problems makes them particularly well-placed to carry out comprehensive studies addressing health issues[1]. Cassorla[2] defends that qualitative research methods, which attempt to understand the meaning given by the subject to his or her own actions, bring the researcher closer to what the clinical practitioner does, which should go beyond the simple recognition of signs and symptoms. Despite recognising this fact, few doctors who carry out research use qualitative methods, understood here as an approach which is concerned with levels of reality dealt with through history, biography, relationships, a universe of meaning, motives, aspirations, beliefs, values and atitudes[3].

Qualitative methods are generally employed in non-medical research or in public health studies carried out by researchers who are not directly engaged in clinical practice. Due to their predominantly technical training, the language used in scientific texts about qualitative methods often appears strange to doctors. This means that they often have difficulty understanding texts dealing with this kind of knowledge, which in turn acts as a barrier to the use of such methods in research[4]. The result is a reductionist approach to certain health problems which might otherwise require a comprehensive and intersubjective perspective. Rooted in ignorance or denial, doctors who carry out research often tend to question the scientificity and validity of the qualitative approach based on the pretext that such methods lack reproducibility and the ability to generalise findings[5]. The cumulative effect of this denial is that few medical journals accept research based on this approach. Indeed, it is not rare for studies to receive, often deservedly, harsh criticism for lack of theoretical depth[6-8] and the descriptive, or even superficial, treatment of empirical findings. However, these inadequacies should not be used to deny the importance of these methods, which provide an alternative to closed-ended questions and an opportunity to create dialogue with the subjects. The anthropologist H. Becker[9] emphasises that social scientists should avoid placing themselves in a methodological straightjacket that seeks to accommodate social reality, when the empirical world is infinitely richer. The challenge is in creating the capacity to understand and interpret this world[10].

To further explore these questions, this review of existing literature on qualitative studies carried out by doctors aims to answer the following questions: what training and professional experience do doctors who use qualitative methods have? What health problems do these studies address? What are the main characteristics of the methodology used by these researchers? Do such studies receive funding?

Material and methods

A search was conducted of qualitative studies undertaken by doctors described in articles published in journals indexed in the Scientific Electronic Library Online (SciELO) between 2004 and 2013. This data base was chosen since it is the most comprehensive record of Brazilian scientific journals which undergo periodic evaluation by a committee made up of professionals experienced in various areas of knowledge. The articles published and indexed in SciELO are also subject to peer review.

The following keywords were used: interview; in-depth interview; semi-structured interview; open interview; qualitative research; qualitative method; qualitative study; focal group; life history; oral history; participant observation; social representations; narratives; content analysis; discourse analysis; hermeneutics and dialectics. This search yielded 1,616 articles. Subsequently, we analysed the article titles and journal names. Articles whose titles clearly showed that the study topic bore no relation to health (linguistics, economics, sociology, politics, environment, philosophy, etc...) were excluded, as were those published in journals covering specific areas, such as nursing and dental health, which traditionally publish articles produced by only by professionals belonging to these fields. After filtering, we read the abstract of each article. For articles addressing issues related to health, we searched the curricula vitae of the first and second authors on the Lattes Platform to identify the doctors. We also selected other articles written by the same authors and articles written by authors who are known to use qualitative approaches recommended by other researchers. Conceptual articles were excluded from the analysis.

The selected articles were initially analysed in terms of author's details (years of experience, academic background, institution of origin, sphere of activity) and information about the journal (area, year of publication, funding). After careful reading and rereading, the articles were classified into categories according to the theme of

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study and we analysed the methodology used in all stages of the research – before data collection, actual data collection and data analysis. Finally, we summarised the main findings and suggested strategies for perfecting the future use of the qualitative methods by doctors.

Results

A total of 135 articles were found based on the above inclusion criteria produced by 68 doctors, of which 42 were women and 26 men. Doctors were the main authors in 82 of the articles and co-authors in 53 articles. The keywords search generated only 63 articles; the remaining 72 articles were identified from the author's name search. Forty-one of the authors had written only one article, 20 had written between two and four, five between five and seven, and two between 8 and 10, during the period in question. Despite the broad-ranging search criteria, it is likely that the search did not generate all the articles produced in this area, since the keywords used by articles often fail to show that the study is qualitative.

Information about the authors and journals

In general, the Brazilian doctors who used qualitative methodology had been in the profession for a considerable amount of time: around half (48.1%) had been doctors for between 21 and 30 years; and almost a third (29.7%) for over 30 years. A small proportion (8.9%) had up to 10 years of experience, and 13.3% had between 11 and 20 years. This trend seems to be in line with the majority of health researchers.

The doctors mentioned 12 distinct spheres of activity on their curricula vitae, two of which stood out: public health (38.5%) and psychiatry (34.8%). Generally, professionals from these areas have more contact with human sciences such as philosophy, anthropology and psychology, thus facilitating comprehensive research. The other areas were adolescent medicine, family medicine, obstetrics and gynaecology, clinical medicine, paediatrics, homeopathy, indigenous health, geriatrics, dermatology and haematology.

The majority of authors were experienced professionals and had postgraduate qualifications: 113 (83.7%) had a doctoral degree; 15 (11.1%) had a master's degree; three (2.2%) were specialists; three (2.2%) graduates; and one (0.8%) was undertaking an undergraduate degree. Although all of Brazil's five regions were represented by the authors, more than 60% of the authors were from academic institutions from the Southwest Region: the States of São Paulo, Rio de Janeiro and Minas Gerais. The following institutions of origin were cited by the authors, in descending order of frequency: the State of São Paulo - Unicamp, USP, UNIFESP, UFSCAR, UNESP, Anhembi Morumbi, Santa Casa de São Paulo and UNITAU; the State of Rio de Janeiro - UERJ, Fiocruz, UFRJ, the Municipal Health Department and UNESA; the State of Minas Gerais - UFJF, UFMG, Unimontes, the Municipal Council of Belo Horizonte and Hemominas.

A little over a quarter of the authors (26.6%) were from institutions in the Northeast Region: the State of Bahia - UFBA, UEFS, CAPS de Cipó; the State of Ceará - UECE and HGWA; the State of Pernambuco - IMIP; the State of Rio Grande do Norte - UFRN; and the State of Paraíba - UFPB. With respect to the South Region, the majority of authors worked in the State of Rio Grande do Sul (Unisinos and Universidade Luterana de Canoa). The North Region was represented by the State of Amazonas (UEA), while the Central-West Region was represented by the Federal District with studies produced in Fundacentro.

With respect to the articles in which doctors were co-authors, the specialist area of the main authors comprised 13 different areas: psychology (43.4%), nursing (15.1%), pedagogy (9.4%), social sciences (7.4%), physiotherapy, occupational therapy, social services, pharmacy, nutrition, dentistry, speech therapy, journalism and economic sciences.

Although the articles were published in 28 different journals, seven journals accounted for 75% of the publications, each producing at least five articles, as shown in Table 1. The remaining journals, which each published up to four articles, were: the Revista Latino-Americana de Psicologia (the Latin American Journal of Psychology); Revista de Psiquiatria do RGS (the Rio Grande do Sul Journal of Psychiatry); Revista Brasileira de Saúde Ocupacional (The Brazilian Journal of Occupational Health); the São Paulo Medical Journal; Trends in Psychiatric and Psychotherapy; Estudos de Psicologia (Psychology Studies); Revista Brasileira de Enfermagem (The Brazilian Journal of Nursing); Revista Brasileira de Psiquiatria (The Brazilian Journal of Psychiatry); and Revista Brasileira de Saúde Materno Infantil (The Brazilian Journal of Mother and Child Health).

The following periodicals had only one co-authored article: the Acta Amazônica; Jornal Brasileiro de Nefrologia (The Brazilian Journal of Nephrology); Psicologia em Estudo (Psychology in Study); Revista da Associação Médica Brasileira (the Journal of the Brazilian Medical Association); Revista Brasileira de Hematologia (The Brazilian Journal of Haematology); Estudos Feministas (Feminist Studies); Revista de Nutrição (The Journal of Nutrition); Revista de Psiquiatria Clínica (The Journal of Clinical Psychiatry); Revista da Escola de Enfermagem Anna Nery (The Journal of the Anna Nery Nursing College); Texto e Contexto (Text and Context); Saúde em Debate (Health in Debate); Revista Brasileira de Geriatria e Gerontologia (The Brazilian Journal of Geriatrics and Gerontology).

Only five of the 28 journals have specific reporting guidelines for qualitative studies. Examples of guidelines include "other pertinent original article structures are accepted, according to the nature of the work" and "the article should comprise Introduction Methodology, Results, Discussion and Conclusion, although other structures may be accepted". Eight of the journals do not provide specific information for publishing articles based on qualitative studies, but permit long articles which tend to occupy more space, which facilitates publication. Six journals have instructions for authors which include rules that technically eliminate qualitative studies, for example: "articles should explain the procedures undertaken so that other researchers are able to repeat the study; the statistical procedure adopted must be described". Restrictions on length of text imposed by eight journals may discourage comprehensive studies which demand greater space for reflection. The rules of one of the journals appear to be ambiguous, since it emphasises that studies must present replicable and generalizable results, while allowing statistical treatment and categorisation of data.

The large majority of articles (95 = 70,4%) did not inform sources of research funding. Only 40 studies (29.6%) clearly mentioned that they received financial support, citing the following organisations: CNPq (National Council for Scientific and Technological Development) – 13 studies; Ministério da Saúde/UNESCO/OPAS/OMS – 10 studies, CAPES (Coordination for the Improvement of Higher Education Personnel) – six studies; FAPESP (The State of São Paulo Research Foundation) – six studies; FAPEMIG (The State of Minas Gerais Research Foundation) – one study; FAPERJ (The State of Rio de Janeiro Research Foundation) – one study; Fiocruz (Oswaldo Cruz Foundation) – one study; FUNCAP - one study; and CDC - one study.

The number of qualitative studies increased over the study period, with only a small reduction in the last two years, as shown in Table 2 and Figure 1.

Table 1. Periodicals with at least five articles (75% of the total).

Periodical	Number of articles
Ciência & Saúde Coletiva	24
Cadernos de Saúde Pública	20
Revista de Saúde Pública	16
Physis	13
Interface	10
Revista Brasileira de Educação Médica	10
Saúde e Sociedade	8
Total	**101**

Table 2. Number and percentage of articles by two-year period.

Two-year period	Number of articles	%
2004 e 2005	11	8,2
2006 e 2007	17	12,6
2008 e 2009	28	20,7
2010 e 2011	42	31,1
2012 e 2013	37	27,4
Total	**135**	**100**

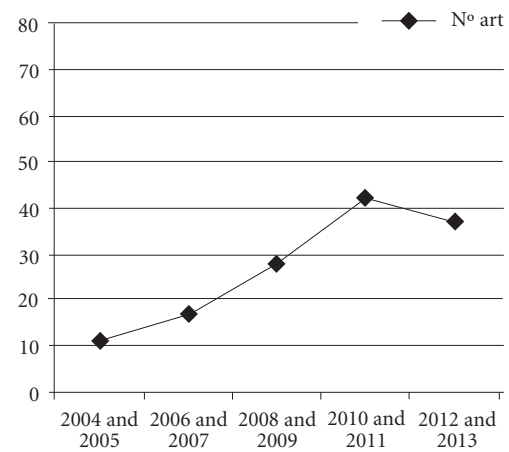

Figure 1. Number of articles per two-year period.

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Data related to the study topics and methodology

Seven topic categories were created based on the reading and rereading the articles. This was a relatively difficult and potentially ambiguous task, since a number of articles fitted into more than one category, and therefore we decided to prioritise the predominant theme of each study.

. Public policies and service organisation (27 = 20%): the articles in this category either addressed the assessment of service provision, management, general public health policies (the Family Health Strategy, emergencies, primary health care, occupational health), or specifically targeted groups (the elderly, men). The target audience of these studies was generally health service managers and health professionals.

. Clinical and surgical medicine (27 = 20%): these articles are based on studies of the patient/doctor relationship and clinical and surgical pathologies, such as chronic, infectious, genetic and oncological diseases, dealing with specific groups such as children, adolescents and the elderly. The main participants in these studies were patients, family members, caregivers, and to a lesser extent, doctors.

. Mental health (23 = 17%): articles about mental disorders, patient services and care, mental health professionals, psychiatric medication and psychiatric reform. The target audience of articles in this category were patients, family members and mental health professionals.

. HIV/AIDS (18 = 13.3%): the majority of studies in this category involved patients or doctors. Subtopics included adherence to therapies, religiosity, access to diagnosis and treatment, lifestyle changes after diagnosis, sero-difference, transmission routes, rapid tests and vaccines.

. Violence (16 =11.9 %): articles dealing mainly with violence against women. Other topics included discrimination, psychological harassment, institutional violence, and violence against the police, children and adolescents. Samples included students, patients, family members, health service managers and health professionals.

. Sexual and reproductive health (13 = 9.6%): studies addressing sexuality, abortion, the prenatal period, gestation and birth, gynaecology and sexual and reproductive health care. Target audiences comprised patients, health service managers and health professionals.

. Medical education (11 = 8.2%): the target audience of studies within this category were medical students and professionals that worked in the education services and dealt with students and teachers. Subtopics included lecturer/student relationships, skills training and doctors' curricula vitae.

Practically all studies (94.1%) dealt with human beings and their relationships, interaction, suffering, pain and potential, according to the following decreasing order of frequency: patients, health professionals, family members, health service managers, lecturers and medical students. A small proportion of articles (5.9%) comprised document analysis.

A total of 85 articles used only one qualitative research technique. The most commonly used technique was interviewing, which was employed by 57 of the studies. Other commonly used techniques included focal groups (15), oral history (3), and ethnographic observation (2). Fifty of the studies used various techniques apart from interviewing, including participant observation, document analysis and focal groups.

Sample size varied considerably with over 50% of studies involving less than 20 participants. All articles that referred to sampling criteria mentioned the concept of saturation but without going into detail.

Regarding description of methodology, 35 articles failed to mention the analysis of empirical or documentary data, but included a description of how collected data was broken down. Five of the articles failed to describe how data was analysed. The most commonly cited method, mentioned in 52 (38.5%) articles, was content analysis in the form of thematic analysis and enunciation, followed by hermeneutic-dialectic analysis, cited in 27 (20%) articles. Other methods which were described with less frequency included discourse analysis, discourse of the collective subject, grounded theory, narrative structure, phenomenological analysis and action research.

A mere 11 studies used software programs to analyse textual data. The programs used were LOGOS, ETHNOGRAPH, QSR Nvivo, Atlas ti, SIM, EVC, Answr, MaxQDA, Openlogos and UCINET.

Discussion

The above information shows that the number of qualitative scientific studies produced by doctors in Brazil remains limited. Although there are an increasing number of studies, this trend is slow. In a study of research in the social science and health field which encompassed the majority of

qualitative studies published by the main journals in this area over a period of 20 months between 2011 and 2012, Minayo[11] found that 31% of studies were qualitative. A comparison of our findings with those of Minayo, shows that the proportion of studies using qualitative methods carried out by doctors is particularly small compared to other categories of professionals. This is not a coincidence. The slow rise in the number of studies is due to a number of obstacles placed by doctors[12] and the limited acknowledgement of qualitative approaches by the sciences. This current state of knowledge is lamentable, particularly given the large contribution qualitative studies have to make to the development and understanding of complex health issues, including internal medicine[13]. The topics covered by the articles analysed by this study fall under the main cross-cutting themes of the public health field[14]: health policies and service organisation, living conditions and health, human resources and health, work and health, and violence and health.

However, the lack of comprehensive studies and importance given to this approach is not a problem only in Brazil. International studies paint a similar picture. Schuval et al.[15] affirm that there was a 3.4-fold increase in the number of qualitative publications in medical journals over a period of 10 years (1.2% in 1998 compared to 4.1% in 2007). Despite this increase, and the recognition of the importance of qualitative research by important journals like the Lancet and JAMA, the overall proportion of studies using this approach remains very low and the use of empirical evidence is yet to receive majority support. A systematic review of articles addressing health services and health system management published in the main international journals in the area carried out by Hoff and Witt[16] found that only one in every seven studies were qualitative.

The characteristics of the articles identified by the present study differ and coincide with those observed by the international literature. Yamazaki et al.[17] carried out a wide-scale review of works published in the world's most influential medical journals – The British Medical Journal, The Lancet, The Journal of the American Medical Association, Annals of Internal Medicine, and The New England Journal of Medicine - between 2000 and 2004. The review found that only 80 studies were qualitative, 78% of which used only one technique. The most commonly used techniques were interviewing and focal groups which were used in 52% and 21% of the studies, respectively. Sample size ranged from 9 to 383 interviews, with an average size of 36. Although 41% of articles did not say what type of analysis was carried out, the articles described the analytical process in detail. Others mentioned the type of analysis but did not explain how it had been done. The most common approach was grounded theory, in contrast to our findings, which showed that the predominant method was content analysis. The use of software programs was also considerably more frequent (41%) than in the Brazilian studies. However, both in Brazil and other countries the use of software has been criticised based on the argument that they cannot replace the researcher's comprehensive analytical process. According to Fossey et al.[18], although these tools may widen the possibilities of data exploration and increase depth of understanding, they can also restrict and distort analysis.

A review of articles involving public health management from nine main journals over a period of 10 years (1998 to 2008) by Weiner et al.[19] found that only 9% of studies used qualitative methods, of which half provided little or no details about the key aspects of the method used. Half of the studies used only one technique and interviewing was used in 80% of the cases, corroborating the findings of our study. Half of the articles informed the funding source, which is a greater proportion than observed in our study. An analysis of the presentation of data from qualitative studies by Sandelowski et al.[20] found a high level of consistency in the way results were produced and presented, regardless of the frame of reference or method used.

Another review of 60,330 articles in 170 of the world's main clinical journals undertaken in 2000 found only 355 original qualitative studies described in articles published in 48 journals. The majority of these periodicals were nursing journals, only four of which had high impact factors[21].

In summary, this study shows that the number of qualitative studies produced by Brazilian doctors is small. Furthermore, the majority of authors are concentrated in the Southeast Region of the country, especially in the State of São Paulo, as is the case with research in other areas. As expected, the majority of authors were affiliated to a university. The main topics covered by the articles were mental health, clinical and surgical situations, and public policies and service organisation, while the majority of doctors worked within the specialty of psychiatry or in public health. Four public health journals - Ciência & Saúde Coletiva (Science and Public Health), Cadernos de Saúde Pública (Reports in

Public Health), Revista de Saúde Pública (Journal of Public Health), and Physis – accounted for over 50% of publications. The most commonly used research tool was interviewing. The sample size was generally small and the use of software programs to analyse textual data was limited. The most commonly used research technique was content analysis. Despite the scarcity of studies, the amount of qualitative studies developed by doctors increased over the last four years. Few studies cited receiving research funding.

It is important to highlight that this review was restricted to articles published in journals indexed in SciELO, and therefore did not encompass possible publications in journals indexed in other data bases.

Finally, qualitative scientific research produced by doctors in Brazil has similarities to international research: it is predominant in public health journals; it is growing slowly; it is small-scale and restricted to certain areas; and it uses the same common techniques. To expand this type of research it is necessary that funding agencies direct investment to provide specific support for qualitative health research. This study shows that, given the range of spheres of activity of the doctors that undertook these qualitative studies without financial support, there is a need for investment and interest in this type of research from within the health care field.

Collaborations

SR Taquette and MCS Minayo participated equally in all stages of the elaboration of this article.

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Article submitted 06/10/2014
Approved 30/11/2014
Final version submitted 02/12/2014