Participatory Methodology and Action Research in the Area of Health

Thiollent, Michel Jean-Marie; Toledo, Renata Ferraz de

Veröffentlichungsversion / Published Version
Zeitschriftenartikel / journal article

Zur Verfügung gestellt in Kooperation mit / provided in cooperation with:
Rainer Hampp Verlag

Empfohlene Zitierung / Suggested Citation:
Thiollent, M.-M., & Toledo, R. F. d. (2012). Participatory Methodology and Action Research in the Area of Health. *International Journal of Action Research*, *8*(2), 142-158. https://nbn-resolving.org/urn:nbn:de:0168-ssoar-414106

Participatory Methodology and Action Research in the Area of Health

Michel Jean-Marie Thiollent, Renata Ferraz de Toledo

This paper aims to promote reflection on the viability and applicability of participatory methodologies, particularly action research, in the area of health. First it shows the human action which is socially conditioned and encompasses many different aspects is the main source of knowledge in action research. Then the paper discusses the objectivity and the scientific nature of this methodology, and its relevance to restoring the human dimension to health care. The conversion of biological and medical facts into collective actions is another issue highlighted by providing examples of how sanitary harmful consequences in terms of environmental or epidemiological issues can be reversed into social mobilisation and actions like education, prevention, health promotion and empowerment. It also intends to show how the use of this methodology in the university context through teaching activities, continuing educational, research projects and community based programs. Finally it concludes that action research offers special importance to build transformative actions and to make improvements on living conditions and health, as well as it is necessary to deal with health system failures.

Key words: action research in the area of health, health promotion, humanization, empowerment, action research in the university context

Introduction

Participatory methodology encompasses a set of practices involving areas such as investigation, diagnosis, training and education, and planning. These practices all require the participation of those interested in the problems to be addressed, and in the search for possible solutions. Action research, on the

International Journal of Action Research, 8(2), 2012, 142-158
ISSN 1861-1303 (print), ISSN 1861-9916 (internet)
DOI 10.1688/1861-9916_IJAR_2012_02_Thiollent

other hand, is more focused on research associated with the explicit action of an actor or a set of actors. It has two main objectives: (a) problem-solving and (b) knowledge-building. In theory, action research is guided by a change in democratic values (for example, citizenship, the struggle against discrimination, the humanisation of care, emancipation). Participatory methods and action research can be applied to very different areas: education, organisation, media and communication, health and appropriate technologies (Thiollent, 2011). In universities these methods can be applied to teaching and research, and to a greater extent, to extra-curricular or community projects. In health there are many applications in various areas of professional specialisation (for example, nursing, medicine, nutrition, health education and collective health, in particular health promotion). It is also used in an inter-disciplinary way in order to achieve interaction with the environment or working conditions in both rural and urban environments. These methods have been discussed over a long period (Hollanda, 1993) and today they are recommended by a number of international and national organisations in relation to health promotion and the process of the humanisation of health provision.

In this paper we will first focus and reflect on some of the principles used to achieve and creatively apply participatory methodology and action research in the area of health. We adhere to the following fundamental principle: in this type of methodology the main source of knowledge is the result of human action which is socially conditioned and encompasses many different aspects, for example transformative, preventive and educational. Second, we will raise the issue of the objectivity of scientific research which, within a constructivist approach, becomes relative and is partly substituted by the issue of the viability of procedures adopted in the construction of knowledge and the implementation of actions agreed. Third, we will revisit the value of the humanisation of health care used to guide research action in this sector. Fourth, we will draft a principle for converting biological or medical factors into collective actions in order to produce change, by providing examples of possible uses of action research, specifically for the area of health. We will establish a bridge between the theory and practice of collective action and, in certain cases, popular mobilisation and social movements. Finally, we will reflect on the conditions for applying action research in university activities,

providing two examples of projects related to the training of nursing professionals.

Possible actions as sources of knowledge

In action research, action is usually considered as a source of knowledge in the same way as it is for any conventional research experiment. Through action, the different participants, including professional researchers, learn something about what they believe reality to be or about the snapshot they take of it. Within the context of health, we can imagine different actions which can lead to the acquisition of knowledge or the enrichment of learning by the individuals involved.

For the moment, we will focus on the following actions, though others exist:

a) diagnosis

b) transformative care

c) preventive/informative action and health promotion

d) training of health professionals

How do we produce knowledge based on diagnosis? This is a different source of knowledge from systematic observation because it is mainly based on the experience of professionals and follows a line of thought where deductions are made “under pressure”, arising from the need to find solutions quickly from the recording of symptoms or signals which could be of an individual or collective nature, occur in the environment, and so on. In action research applied to the area of health, diagnosis is constructed not only based on the experience of these professionals, but also on the experience of the subjects involved in the situation being investigated. It is therefore understood not only as a “result” but as a “process" which will steer actions/interventions in a cyclical way, producing knowledge for both subjects and professionals as it develops.

Transformative action of care can be guided towards the humanisation of medical, nursing and dental practices, among others, both at primary and

hospital health care levels of provision. Humanising action presupposes that there was a gradual process of degradation or lack of improvement in the practice of the professions associated to health. This type of action requires a chain of interpretations of the facts observed and their corresponding actions which should be planned, applied, made viable or prevented.

The purpose of preventive/informative actions is to prevent the emergence of specific diseases and produce health promotion initiatives which are more collective by nature, the purpose being to approach health in a holistic way for different groups or population categories such as children, adolescents, women, the elderly or disabled. They are complementary actions such as dealing with risks linked to inadequate diet (excess of sugars and fats, for example), sexuality and reproduction, smoking and alcohol problems, the use of drugs, the absence of water treatment, traffic accidents. They focus on strengthening individuals in their roles as social subjects so that, through their knowledge of determining and conditioning factors related to their health, they can continuously seek to improve their standards of living. Ideally, these types of concrete action can have a significant effect on both the lives of individuals and on a reduction in public health costs. For a broader vision of the health promotion debate see Czeresnia and Freitas (2003).

The action of training health professionals takes into account the requirements for up-to-date technical training, the models of training to be adapted within a perspective of improving working conditions and the humanisation of services provided to users.

Each type of action listed above is associated to a source of knowledge. Research into the best way of making preventive or health promotion action more effective requires (and provides) knowledge about epidemiological factors in a variety of contexts. Diseases are propagated or affect the living standards and conditions of a certain population or social group in socio-environmental, cultural, political and economic contexts, among others. Social researchers do not use action research because of mismanagement of medical issues. On the contrary, they contribute to the professional training of skilled health experts so that they can benefit from real life experiments guided by principles of participatory and/or action research.

From a more wide-ranging perspective of action at the heart of society, this type of research can be seen as positive actions to address the socio-economic situation of a population by improving working (in industrial companies, services and agriculture), housing and environmental conditions through a reduction in atmospheric pollution, improvement in water quality and sewage and so on. Intervening in critical situations based on the analysis of action provides knowledge inter-linked with the practices of the actors, agents, institutions, groups and individuals involved. This interaction provides for a more effective intervention.

Apart from actions related to improving social, economic and environmental living standards, we can also point to a number of actions related to the health system itself. Action research can be used to review standards of care, access issues related to the purchasing power of patients, social coverage, rights related to citizenship, conception of care and so on.

It is important to increase our knowledge about the working mechanisms of the health system and to find a way of intervening in some of its elements or processes at an institutional, managerial or political level, as well as securing the support of social movements (either through unions or popular pressure) in order to defend the rights to health care when these are being threatened by the market.

In fact, with the imposition of neo-liberal models and practices, the management and economics of health care are becoming more unequal. Individualism has grown and we have seen an increase in an "each for themselves" attitude. Health has stopped being a right and an issue related to citizenship, to become a profitable business like any other. Patients are seen as consumers of medicine and high cost services, controlled by large private companies. While concentrated power and resources are in the hands of a minority , for a large part of the population, living and health standards are falling. From an egalitarian outlook a critical view of the health system emerges which questions prevailing interests and conceptions.

Within this context action research, because of its participatory and dialectical nature, capable of producing knowledge, can contribute towards a reflection on the different subjects involved in the health system (public users, professionals and managers), and at the same time can also contribute

towards empowerment and health advocacy, facilitating the implementation of public policies in order to combat the scenario described above. Consequently, it can lead to a possible re-structuring of the system.

Objectivity of knowledge and viability of procedures

Some researchers, influenced by a positivist vision of science, tend to doubt the objectivity or scientific nature of action research. In response to this, we would claim that in this type of research, just as in any other scientific study, there are many objective facts which can be investigated using all possible methodological resources. Even when they are used by the researchers involved in a particular situation, procedures should be conducted with as much impartiality as possible. However, the objectivity we are dealing with here cannot be reduced to a fact or a situation that is independent of human or social apprehension. Field work requires a subjective dimension, researchers are implicated and recognize the values of agents, but this does not mean that researchers need to take on the values of actors or express themselves by using the same discourse as agents.

In an action research project, actors adopt a position or their own set of values. An actor or a set of actors is willing to change some aspects of a particular reality, therefore, an agreement or the negotiation about potential and feasible action is reached. This should not be interpreted as a limitation to the objectivity of knowledge or this methodology. With regard to action, fighting against inequalities and the desire to strengthen citizenship or humanise care does not diminish the objectivity of the data obtained in procedures which are scientifically accepted. Looking at knowledge from this perspective, it is common that the object to be investigated is broken down and data is selected by its significance, but this does not affect the rigour of the procedures applied. If data are contradictory in relation to contemplated actions, these may have to be redefined, altered or even abandoned.

Many health practices continue to follow positivist patterns of science and technique. They work by describing and acting on reality by using data and procedures, resulting in an extreme reduction in their complexity. Sometimes

this occurs through hyper-specialisation which leads to a loss of the systemic and holistic characteristics of nature and life itself.

Epistemologically, the distance caused by objectivism can be overcome by adopting constructivist tools (here, we do not consider the large number of existing tendencies). Thus, according to Glasersfeld's (1997) radical constructivist perspective, we can imagine that, within the context of social investigation, there is no transfer of knowledge between researchers and actors in a particular situation and there are no perfect conditions of objectivity. This is because reality is not perceived as being independent from the cognitive nature and value-giving characteristics of the subjects involved, whether they are the researchers or those being researched. Therefore, the concern regarding the objectivity of scientific representation of what is real and the absolute truth of facts ends up being substituted by a notion of the viability of procedures, which characterises knowledge-building produced by the subjects according to their objectives and previous experiences. If we apply this argument to the context of health, medicine and nursing practice, the constructivist perspective allows us to think that none of the agents involved, whether researchers, doctors, nurses, patients or anyone else, absorb the knowledge of others or transfer their own knowledge to others. Diagnosis, explanations about disease and the search for appropriate treatments are built and assimilated by each agent on the basis of representations and values they have previously acquired. New information only makes sense if it can be assimilated into existing cognitive structures, the result of either socialisation or previous education.

Through action research developed in a health centre at the periphery of the city of Belo Horizonte, capital of the State of Minas Gerais, Brazil, Vasconcelos (1998) sought to show the significance of Paulo Freire's popular education in combatting infectious and parasitic diseases. He claims that, in general, medicine has not been concerned with understanding the different types of knowledge, concepts and strategies used by the population to address their health problems and he states that health education is the best way to create a link between medical action and the day-to-day practices and thought processes of the population, as long as it is not based on authoritarianism or blaming individuals. In the process of investigation and intervention stimu-

lated by action research, the author sought to identify how cultural, cognitive and subjective issues either hinder or improve the way the health services work, and in this context, popular education proved to be very useful for creating an environment of co-operation and dialogue between health professionals and the population, thus facilitating the construction of knowledge, the mediation of conflicts and the joint efforts (by professionals, patients and families) in addressing health problems. Morin, Gadoua, and Potvin (2007) suggest going further with regard to the construction of knowledge based on professional, personal and group experiences.

Health care and humanisation

Care presupposes the existence of a certain type of interaction between, on the one hand, doctors, nurses and other qualified health professionals and on the other, patients, families and other non-professional people involved. Care is not only dependent on the willingness of professionals, but also on the institutional framework which they operate within (public and private organisations with the support of the public health system or private health agreements). Some types of care also depend on certain models of health provision, from primary care provision: which in the Brazilian Public Health System (SUS) is the main gateway for the population, with a focus on the integration of health care, to secondary and tertiary levels of provision which refer patients to areas of particular expertise, more and more centred on state-of-the-art biomedical technology (diagnosis and surgery) and high impact biochemical medication. An extreme form of this trend leads to a significant loss in inter-personal relationships. Therefore, it can be the case that quality of care deteriorates, becoming less humanised. Dehumanisation in modern medicine is associated to a number of factors: standardised relationships without exchanging knowledge or information, without any moral support and focused on machines and chemical medication. This is the case in medicine, nursing, complementary activities and styles of management in the different health services. Increasingly, quality of services is becoming dependent on economic considerations because, as previously mentioned, health is less an issue of citizenship and more a matter of business: the patient

is seen as a differentiated consumer whose purchasing power determines the treatment he or she will be able to receive. On the other hand, we hope that the trend towards the humanisation of the health services becomes firmly established, leading to more respect for citizenship in general, and to a greater regard for patients in relation to health provision.

Participatory and action research can be conducted in order to restore the human dimension to health care as it requires a proper relationship between people (health professionals, patients and families), thus allowing for a reflection on the roles of each subject as well as obliging them to put themselves in the "shoes of the other". In a study about the professional daily routines of nurses, a position that encompasses both the role of carers and educators, Coscrato and Bueno (2010) focused on the principles common to both humanisation and action research. Both processes contribute to the transformation of reality and social subjects, thus demonstrating the viability of using this type of methodology for health research with educational objectives and providing the possibility of a new professional path for nurses.

Also, with regard to health care, but within the family context, Andrade e Rodrigues (2002) stress the relevance of action research from a holistic perspective, in order to understand and provide support to the family care system for elderly people who have suffered from cardio-vascular accidents (CVA). Despite being a study about a very specific situation, the results presented and discussed by the authors allow us to consider the significance of action research within complex and specific contexts such as those that involve care in health situations, either within a family or professional setting, with a view towards the humanisation of care.[1]

With regard to the ethical dimension of research, it is thought that in any experimental research involving human beings there is a code of ethics which requires that a *free and informed consent agreement* is signed by those who will be the object of investigation. In participatory and action research this procedure should also be used. It can be improved by means of communication between the interested parties and social organisations involved. The

---

[1] In order to go further into the subject of the humanisation of health care, see Deslandes (2006).

ethics of research action needs to be discussed in order to strengthen the humanisation of health care and avoid manipulation and false promises regarding changes.

Conversion of biological and medical facts into collective actions for change

Based on the complex issues identified within the immediate reality, the project of action research can generate social and collective action from the problematisation of issues and the production of knowledge. It can also be the source for drafting and proposing possible solutions. For example, after the detection of a problem that is manifested biologically (air contamination, the presence of micro-organisms in water or food), researchers can adopt conventional procedures and non-dialectic instruments for data collection in order to conduct physio-chemical analysis. However, they can also combine these instruments with dialectical instruments to encourage the active participation of those interested in the process of identifying problems, causes and possible solutions and thus open the way for "collective research and action".

For example, the experience of developing action research with an indigenous community in the north-west of the Brazilian Amazon successfully illustrates the possibility for converting biological factors into collective action and combining different research tools. This is a project that was conducted in the district of Iauaretê, in the municipality of São Gabriel da Cachoeira in the State of Amazonas, Brazil, between 2005 and 2008. Iauaretê belongs to the Indigenous Territories of the Alto Rio Negro. It has approximately 3000 inhabitants with some fifteen ethnicities, the majority Tukano and Tariano. It stands out for both its high population concentration with regard to other indigenous territories and for its urban characteristics. However, it does not have access to sanitary services such as treated water provision, the collection and treatment of solid waste and sewage. Within this scenario, habits and practices which are incompatible with the current population pattern have continued, within a context of large socio-cultural diversity and mythological beliefs about the interpretation of the health-environment relationship. This has resulted in a number of socio-

environmental impacts affecting the health of the local indigenous population. With this in mind, a multi-disciplinary team sought to identify, by means of action research, the main sanitary and socio-environmental problems faced by the local inhabitants, as well as the cultural issues that influence this process. They conducted health promotion actions adapted to this socio-cultural reality and made proposals for sanitary improvements in relation to sewage, water supply and solid waste disposal (Toledo, 2011).

The methodological procedures adopted in this process of research and intervention used a combination of different instruments such as questionnaires, interviews, participant observation, the production of talking maps and photo panels, studies for addressing the issues of solid waste disposal, the quality of water sources, the contamination of the soils by intestinal parasite eggs or cysts, parasitological research and geo-referencing of the information obtained in the field. Two mini-courses were also conducted, one about solid waste and the other about diet (Toledo et al., 2006; Giatti et al., 2007; Rios et al., 2007). Here, the results from biological factors stimulated reflective processes about the reality of the main subjects involved in the research. Dialogue and the exchange and building of knowledge took place through community meetings and participatory techniques. This knowledge contributed, therefore, to social mobilisation and the search for improved health and living standards.

It is therefore clear that from the perspective of action research, it is possible to bring together research about biological facts: harmful consequences in terms of sanitary, environmental or epidemiological issues, with the mobilisation of the community in order to fight against the harmful effects to their health, thus integrating the results of conventional or laboratory research with actions such as education, prevention, health promotion and empowerment.

Other possibilities can also be considered, such as research about the efficacy of specific types of care or service provision, where results can be converted into changes in the health service. In a study by Acker (2008), focusing on oral health, results from the action research produced a break with the past, not only in the way of thinking, but also in relation to the performance of different health professionals with regard to oral health

within the health service investigated, producing knowledge that contradicted the knowledge and practices of the established dental clinic.

The principle of converting a biological fact into social action, therefore, can be applied to various practices related to health. It can be adapted to diagnosis and treatment issues which occur in relation to the doctor/patient relationship, both at an individual and collective level. Within the context of health promotion, or even disease prevention, turning biological facts into social action can be facilitated by using practices whose purpose is to provide education, awareness, information, communication and so on. In certain cases, social mobilisation may be expected, as in the example given above. Awareness requires a good knowledge of psychological factors which affect the perception of issues such as health, habits, sexual behaviour and diet (focusing on issues such as excess of fats and sugar). In educational actions, groups can become aware of facts, problematising their effects, finding solutions that are within their reach in order to re-assess their behaviour.

The proposal of converting facts by using action research can also be applied to the fields of nursing and occupational health, both in rural and urban areas, looking at factories and service companies and including, for example, studies about accidents in order to reduce risks. Mendes (1999) sought to contribute to the improvement of health and safety conditions of workers by conducting an action research project with the members of the Internal Commission for Accident Prevention (ICAP) of three companies. These commissions are responsible for providing workers with guidance in relation to accident prevention. An educational programme was developed based on Paulo Freire's pedagogy which fosters problematisation and awareness. This programme produced changes in how these professionals, mostly nurses, understood these issues which they then disseminated amongst their colleagues. Another action research project carried out by Zavariz (1994) investigated the use of metallic mercury in industries in the state of São Paulo, Brazil. After intervention there was a reduction in the number of workers exposed to the metal as well as in the levels of mercury found in urinary dosages. In these two examples, therefore, we can see that research was converted into actions.

Finally, it is worth pointing out that environmental, social, cultural, economic and political factors, among others, are important for deciding on preventive and health promotion actions. These factors determine and condition the risks to which sectors of the population or social groups are exposed. The likelihood of occurrence of harmful effects to human health is not the same for everybody. Low income populations are more vulnerable to certain diseases than those on higher incomes. Particular micro-organisms "select" their victims according to their life conditions, work or housing situation. In general, poverty provides a framework of socially conditioned vulnerability in relation to some diseases, in particular infectious and parasitic diseases. On the other hand, other diseases mainly affect more affluent sections of the population (as a result, for example, of dietary excesses or stress related to executive positions).

Action within the university context

Within the university context, action research can be used in research projects, teaching activities and increasingly in programmes or projects for the community through continuous educational activities. In practice, action research requires that groups or teams be composed of teachers, students and technicians. Institutional support is also required, in the shape of groups working in partnership, internal or external to the university. Broadly speaking, the methodology of action research together with other participatory methods, particularly those geared towards the planning of activities and evaluating results or impacts, can be useful with regard to producing and assessing public policies. It is clear that the work university does with the community can increasingly contribute to public policy.

By using action research, management problems and gaps in professional education of professional groups can be turned into action involving management, organisation or training which is partly conceived and promoted by interested parties themselves. It is necessary to assess up to what point health professionals, within the university context, are willing to adopt collective forms of learning, dependent as they are on assessment systems, prestige levels and career uncertainties, etc.

Action research methodology has been applied within the context of hospital management and the training of health personnel in various areas, including nursing. For example, the project of nursing personnel training in the University Hospital of the Juiz de Fora University, conducted in 2007-2008 (Jesus et al., 2011). This project was divided into the following phases:

a) Participatory survey of the training needs of the nursing personnel: facts observed served as a basis for proposals of transformative action in relation to training;

b) broad discussion of the issues with interested parties;

c) the production of a training plan for the various categories of professionals in the nursing department;

d) the creation of training content and continuing educational actions, including the participation of qualified people from outside the initial group.

These points relate to a sequence based on the following stages: investigation/discussion of issues/planning of the action research proposal by João Bosco Pinto (no date) and Paulo Freire. In this specific case, these steps facilitated the application of action research methodology in projects within the nursing context of hospital practices and technical training, guided by humanisation. By using this sequence the nursing team acquired knowledge of research, and gained greater recognition for the team within the university.

Another example of action research developed within a university context is described by Oliveira and Ciampone (2008), the aim of which was: to find out how nursing graduate students at the Pontifical Catholic University of São Paulo, Brazil, perceived their living standards; to understand and analyse the demands presented by looking at the situations they lived in and, through the creation of an operations group, put into practice guidance and strategies to improve these conditions. In order to do this, interviews were initially conducted which steered the issues to be debated in the focus groups which took place at a later stage. This research showed that some university experiences led to a good standard of living for students whilst others did not. It also demonstrated that there is a need for formal meetings in which students and teachers can discuss the building of individual and collective strategies

for addressing a number of issues which students face during the process of their university education. Action research, therefore, can facilitate such discussions and interventions, possibly leading to a better standard of living.

Conclusions

The improvement of health practices can be expected when participatory and action research practices are employed. The idea is to research aspects of the immediate reality using a methodology related to the values of humanisation of care, autonomy and the advancement of citizenship. As these methodologies are not yet applied on a large scale, it is necessary to foster their development, train professionals and exchange experiences.

From the perspective of action research, social reality is not perceived merely as a static object to be represented or measured. It is conceived as a broad process in which converging and diverging, or even contradictory, actions take place. These may be carried out by agents and institutions whether they are perceived as powerful or not. Actions are researched and considered as important sources of knowledge. Once knowledge is apprehended or built, it can serve as a starting point or tool to produce other specific actions focused on the problems identified. Their resolution or treatment feeds into the original knowledge.

Both with regard to actions aiming to promote health and to those seeking to prevent disease, there is space for developing information or educational actions. Within this context, participatory or action research have a number of applications in the long-term, since problematic situations in general are serious and complex.

In summary, this type of methodology allows for the building of a broad range of transformative actions, and a number of improvements to reduce social suffering in relation to the set of conditions which cause and propagate disease. It also provides us with the means to address the failures of the health system.

References

Acker, M. T. V. Van (2008). *A reflexão e a prática docente: considerações a partir de uma pesquisa-ação.* Thesis (PHD) – Faculdade de Educação, Universidade de São Paulo, São Paulo.

Andrade, O. G. de, & Rodrigues, R. A. P. (2002). Abordagem holística do sistema de cuidado familiar do idoso com acidente vascular cerebral. *Revista Ciência, Cuidado e Saúde, 1(1),* 185-191.

Coscrato, G., & Bueno, S. M. V. (2010). Pesquisa qualitativa sobre humaização em saúde mediatizada por pesquisa-ação. *Sau. & Transf. Soc., 1(1),* 120-128.

Czeresnia, D., & Freitas, C. M. de (org.) (2003). *Promoção da Saúde. Conceitos, reflexos, tendências.* Rio de Janeiro: Fiocruz.

Deslandes, S. F. (org.) (2006). *Humanização dos cuidados em saúde. Conceitos, dilemas e práticas.* Rio de Janeiro: Fiocruz, 2006.

Giatti, L. L., Rocha, A. A., Toledo, R. F., Barreria, L. P., Rios, L., Pelicioni, M. C. F., Mutti, L. V.,, Cutolo, S. A. (2007). Condições sanitárias e socioambientais em Iauaretê, área indígena em São Gabriel da Cachoeira/AM. *Ciência & Saúde Coletiva, 12(6),* 1711-23.

Glaserfeld, E. von (1997). *O construtivismo radical. Nova forma de conhecer e aprender.* Lisboa: Instituto Piaget.

Hollanda, E. (1993). Práticas alternativas de pesquisa: Alguns questionamentos sobre as potencialidades e limites da pesquisa-ação e pesquisa participante. In V.V. Valla & E.N. Stotz (eds.), *Participação popular, Educação e Saúde.* Rio de Janeiro: Relume-Dumará.

Jesus, M. C. P. de, Figueiredo, M. A. G., Santos, S. M. dos Reis, Amaral, A. M. M. do, Rocha, L. de O., & Thiollent, M. J. M. (2011). Educação permanente em Enfermagem em um Hospital Universitário. *Revista da Escola de Enfermagem da USP, 45(5),* 1229-1236.

Mendes, M. D. (1999). *Enfermagem do trabalho e educação em saúde: modelo de educação conscientizadora para CIPA's de empresas públicas.* Thesis (PHD) – Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, São Paulo.

Morin, A., Gadoua, G., & Potvin, G. (2008). *Saber, Ciência, Ação.* São Paulo: Cortez.

Oliveira, R. A. de, Ciampone, M. H. T. (2008). Qualidade de vida de estudantes de enfermagem: a construção de um processo e intervenções. *RevEscEnferm USP, 42(1),* 57-65.

Pinto, J. B. (forthcoming). *Metodologia, teoria do conhecimento e pesquisa-ação.*

Rios, L., Cutolo, S. A., Giatti, L. L., Castro, M., Rocha, A. A., Toledo, R. F., Pelicioni, M. C. F., Barreira, L. P., & Santos, J. G. (2007). Prevalência de parasitos intestinais e aspectos socioambientais em comunidade indígena no distrito de Iauaretê, município de São Gabriel da Cachoeira (AM), Brasil. *Saúde Soc., 16(2),* 76-86.

Thiollent, M. (2011). *Metodologia da pesquisa-ação* (18.ed.). São Paulo: Cortez.

Toledo, R. F., Peliconi, M. C. F., Giatti, L. L., Barreira, L. P., Cutolo, S. ., Mutti, L. V., Rocha, A. A., & Rios, L. (2006). Comunidade indígena na Amazônia: metodologia da pesquisa-ação em educação ambiental. *O mundo da saúde, 30(4),* 559-569.

Toledo, R. F. (2011). Pesquisa-ação: aprendizagem, produção de saberes e de práticas cidadãs. In P. P. Jacobi, (org.), *Aprendizagem social: diálogos e ferramentas participativas: aprender juntos para cuidar da água* (pp. 37-46). São Paulo: IEE/PROCAM.

Vasconcelos, E. M. (1998). Educação popular como instrumento de reorientação das estratégias de controle das doenças infecciosas e parasitárias. *Cad. Saúde Pública, Rio de Janeiro, 14(Sup.2),* 39-57.

Zavariz, C. (1994). *Avaliação da utilização industrial de mercúrio metálico no estado de São Paulo e aplicação de metodologia de intervenção nas condições de trabalho.* Dissertation (Masters) – Faculdade de Saúde Pública, Universidade de São Paulo, São Paulo.

About the authors

Michel Thiollent is currently professor at the Management Graduate Program – UNIGRANRIO (Rio de Janeiro). Former associate professor (retired) at COPPE/Universidade Federal do Rio de Janeiro.

Renata Ferraz de Toledo. Post-doctoral researcher at the Faculdade de Educação - Universidade de São Paulo – FEUSP (São Paulo), post-doctoral fellowship by Fundação de Amparo à Pesquisa do Estado de São Paulo – FAPESP (Process number 2010/13839-0). Graduated in Biology (UNESP/Botucatu, São Paulo). Environmental educator, Master and Doctorate degrees in Public Health (Faculdade de Saúde Pública – Universidade de São Paulo FSP/USP).

Authors' addresses

Michel Thiollent
UNIGRANRIO-PPGA
Rua da Lapa, 86, 9th floor
CEP 20041-040 Rio de Janeiro, RJ, Brazil.
E-mail: m.thiollent@gmail.com

Renata Ferraz de Toledo
Rua Sapucaia, 655. Alto da Mooca.
CEP 03170-050 Rio de Janeiro, RJ, Brazil.
E-mail: renataft@usp.br