# Action Research: An appropriat Action Research: An appropriate research methodology for improving healthcare practice

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## Abstract

***Aim*** To describe action research and to discuss why it is an important and appropriate methodology for improving health care practice, compared with other methodologies.

***Key Issues*** While the definition of action research varies, it encompasses four basic themes: empowerment of participants, collaboration through democratic participation, acquisition of knowledge, and individual & social change. It, therefore, incorporates the concepts of participation, equality, collaboration, reflection and emancipation. Three types of action research include the scientific-technical view of problem solving, interpretative-collaborative action research, and critical-participatory action research. Variety philosophies in action research depend on typology. Pluralism provides the philosophical basis for most action research, and qualitative and quantitative approaches are used to answer research questions.

Action research focuses on working with people that are stakeholders in real situations, to access and identify problems, to implement and action the research process and ultimately, to achieve change that is sustainable. Ethical issues are an important component of action research because it is carried out in real-world circumstances. Researchers accept, respect, and negotiate with all participants involved in the action research process, and accept responsibility for maintaining confidentiality.

Current health care practices call for increased collaboration between interdisciplinary health professionals and stakeholders, in an environment of equality. Action research is a bridge in the theory-practice gap and provides a feasible means of

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conducting research in real situations. The results of action research benefit all stakeholders, including researchers, theorists, practitioners, and patients.

**Conclusion** Action research requires imagination, thought, collaboration, and participation to affect sustainable change and to improve health care practice.

**Keywords:** Action Research,  health care practice, systematic review

## Introduction

Research is a process that answers questions to uncover existing realities and to generate new knowledge. Action research is employed currently in a diversity of fields and settings. In the mid 1940s, it was used in working groups of industry, and then in education, business management, social care, and health care practice and services (Lewin, 1946; Reason and Bradbury, 2001; Kemmis and McTaggart, 2003).  Current health care researchers, particularly those in nursing management and primary health care service, are more interested in using action research to improve service and practice (Hampshire, 2000; Morrison and Lilford, 2001; Kelly, Simpson, & Brown, 2002). Although action research has proven to be useful in many situations, it has also been criticized for its lack of rigor and weakness in generalization.  Action research, however, adds value to the specific contexts and settings in which it is applied.

Most researchers and practitioners believe that action research can decrease the gap between theory and practice (Webb, 1989; Meyer, 2000; Hampshire, 2000; Badger, 2000; Reason and Bradbury, 2001; Kemmis and McTaggart, 2003) and therefore, deserves credit for its hand in the development of health care practice.

The aim of this article is to describe action research and to discuss why it is an important and appropriate methodology for improving health care practice, compared with other methodologies. The definition, epistemology and typology, evolution, and principles and process of action research are described and discussed. Stories demonstrating the successful use of action research, and its importance to health care practice and service, are described.  Finally, ethical considerations in conducting action research in real life situations are explored.

## Materials and method

This paper summarizes the findings of a systematic review of published research that relates to action research methodology and the use action research in health care service and practice, for the period from 1998-2011. Papers published in journals, textbooks, and electronic data bases, such as Blackwell Science Ltd., Pubmed, Proquest, Sage Publications, Medline, and Google scholar, etc., were considered eligible for inclusion. We sought and obtained helpful comments on a draft of this article from two people; both academic and practical health care practitioners that are active in the field of action research, for validity.

**What is action research?**

Academics and practitioners in a variety of areas have defined the concept of action research diversely based on their experiences. Action research was first used in 1946 by a social psychologist, Kurt Lewin, who emphasized its three–step spiral process of planning an action, which involves reconnaissance, taking action, and fact-finding, or determining the result of the action (Lewin, 1946; Dickens and Watkins, 1999; Meyer, 2000; Hampshire, 2000). Hart and Bond (1995) described action research in health and social care as an appropriate way to identify problems in clinical practice

and to develop potential solutions to improve practice.

Action research has also been described as a methodology. Meyer (2000) agued that action research is a style of research rather than a specific method, and that there are three important elements which comprise action research: the participatory character of action research, its democratic impulse, and it simultaneous contribution to social science and social change. Morrison and Lilford (2001) studied the use of action research in health services. They found that the five key tenets of an idealized action research approach are: flexible planning, an iterative cycle, subjective meaning, simultaneous improvement, and unique context. These tenets are congruent with Lewin's concepts, which emphasize a participatory approach and a spiral cycle.

Ladkin (2004) summarized four key features of action research from an action research workshop, as: the undertaking of a cycle of action and reflection, the practice of collaboration, developing sensitivity to action research as an emergent process, and going "public". Reason (2005) described action research as follows:

*"Action research is a participative and democratic process that seeks to do research with, for and by people; to redress the balance of power in knowledge creation; and to do this in an educative manner that increases participants' capacity to engage in inquiring lives"*

*(Reason, 2005, p.5)*

Reason similarly described four characteristics of action research as: worthwhile practical purpose, democracy and participation, many ways of knowing, and emergent developmental form (Reason, 2001, 2005).

While the definition of action research varies depending on the context and field of study, each variation emphasizes an action focus, a process focus, and a local focus. Definitions of action research also commonly encompass four basic themes: empowerment of participants by iterative cycles and reflection, collaboration through democratic participation, acquisition of knowledge, and individual and social change. These themes, in turn, incorporate the concepts of participation, equality, collaboration, reflection, and emancipation.

## Epistemology and typology of action research

The nature of knowing in action research is rooted in the experiences of practice that occur in daily human life. There are different schools of thought about practical research, so there are many ways of knowing. Action research originated from Lewin's critical social theory (Kelly and Simpson, 2001; Reason, 2005) at a time when positivism was failing to explain all social or scientific phenomena. Some research questions cannot be explained only by one philosophy. Reason (2005) claimed that action research is based on many philosophies and theories that include liberal humanism, pragmatism, phenomenology, and critical social theory. Ladkin (2004) suggested that the epistemology of action research should include experiential knowledge, practical knowledge, and presentational knowledge. Qualitative and quantitative approaches are applied to explore knowledge of truths in action research. We considered multiple ways of knowing in action research, with pluralism as the philosophical basis.

Typology illustrates action research as a methodology that depends on epistemology. Holter and Schwartz-Barcott (1993) identified three types of approaches to action research: a technical collaborative

approach, a mutual collaborative approach, and an enhancement approach. Similarly, McKernan (1991) described the scientific-technical view of problem solving, practical-deliberative action research, and critical-emancipatory action research (McKernan, 1991 cited in Masters, 1995). Kemmis and McTaggart (2003) identified five types of action research: the first type (practice as individual behavior) emphasizes the scientific perspective, the second types (practice as social and systems behavior) emphasizes the objective perspective which are similar to the technical approach, the third type (practice as international action) stresses on interpersonal relation, the fourth type (practice as socially structured and shaped by discourses and tradition) accents the subjective perspective which resemble the practical-collaborative approach, and the fifth type (practice as reflexive) highlights the reflexive-dialectical view of subjective-objective relation which close critical- emancipatory action research (Kemmis and McTaggart, 2003).

Not all authors recognize the same three types of action research. Hart and Bond (1995), for example, identify four action research approaches as a respective methodology, based on the evolution of thought and context, from experimental to social constructionist by empowerment:

*"First, the experimental type is most closely associated with the early days of action research and the scientific approach to social problems, which characterized Lewin's change experiments and his concern to discover general laws of social life to inform policy-making. Second, the organizational type represents the application of action research to organizational problem- solving, including such problems as restriction of output and absenteeism, and has at its core a concern to overcome resistance to change and create more productive working relationships. Third the professionalizing type is informed by an agenda grounded in practice which also reflects the aspirations of the new professions, such as nursing, teaching and social work, to enhance their status on a par with the established professions, such as law and medicine, and to develop research- based practice. Forth the empowering type is most closely associated with community development approaches and is characterized by an explicit anti oppressive stance to working with vulnerable groups in society"*
*(Hart and Bond, 1995, p.39, 44)*

Meyer (2000) explained the same four types of action research and noted that the scientific claims of action research are based on a different philosophy.

We described action research based on the philosophy of three typologies: The first is scientific technical action research that is natural science or post-positivist perspective, beliefs in objective matter. The second is interpretative collaborative action research that is interpretative or phenomenological perspective, beliefs in subjective and experience of human. The third is critical participatory action research that is critical social theory and pluralism, beliefs in capacity of human and multiple perspectives. However, the underpinning philosophy of the researcher and the research questions determine typologies, which typology of action research is best used.

**Action research principles and processes**

The principle of action research developed from Lewin's principles. Lewin explained the process of action research in a spiral of steps: planning, action, and finding the result of the action (Lewin, 1946). Kemmis and McTaggart (2003) similarly explained that action research is "generally thought to involve a spiral of self-reflective cycles of planning a change, acting and observing the process and consequences of the change, reflecting on these processes and consequences, and then re-planning, acting and observing, reflecting, and so on…" (Kemmis and McTaggart, 2003).

Many authors have claimed to use action research in a variety of fields, particularly in health care services, and most have adapted Lewin's principles and process. Webb (1989) described the process of action research as being similar to nursing process; that is, in term of assessment, diagnosis, intervention and evaluation.

Action research focuses on working with people that are stakeholders in real situations, to assess and identify problems and implement the research process to ultimately achieve change that is sustainable. It usually involves participants sharing in a group, reflecting and providing feedback on data, and then empowering participants to take part in the research process. However, Hampshire (2000) noted that completing the action research process is a difficult undertaking when working within a short time frame, often leading to pressure on researchers. Furthermore,

action research does not occur within a specific time frame. The research process ends when all stakeholders have agreed that the goals of the research have been

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achieved, or that the project is sustainable. We demonstrated the process of action research in health care practice in Figure 1
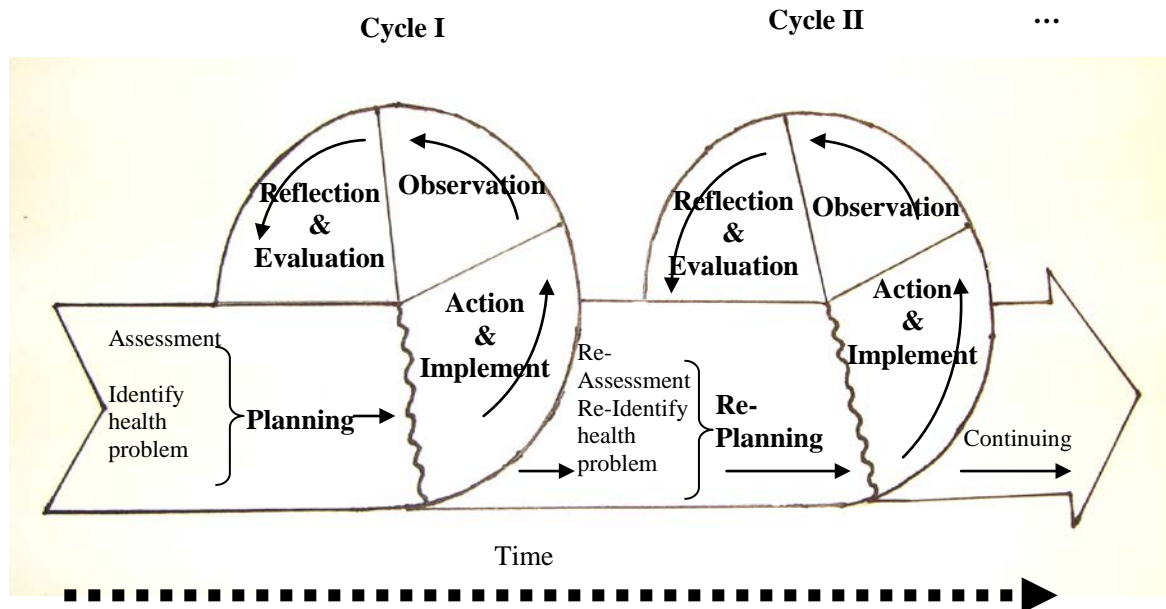


**Figure 1** Action Research model for health care practice

**How do we use action research?**

Using action research depends on the underpinning philosophy of the researcher and the research questions. The underpinning philosophy is the researcher's belief about the truth which exists in the world. For example, a researcher that believes that humans have abilities and are able to solve problems by themselves may be led to use critical participatory action research. Action research is applied in real situations, rather than in contrived,

experimental research situations, because its focus is on solving real problems. It is commonly used when circumstances require flexibility and participation, and when change is a goal (Reason, 2005).

In addition to the four types of action research, which we have previously described, Hart and Bond (1995) have noted seven distinguishing criteria which are present in all types of action research. Each criterion, which has been similarly

described by Meyer (2000), is summarized

in Table 2.

**Table 2**  Action research typology and seven criteria (Hart and Bond, 1995 p. 40-43;

Meyer, 2000 p. 179)

| Action research type: distinguishing criteria | Consensus model of society  Rational social management | ⟵⟶ | | Conflict model of society  Structural change |
|---|---|---|---|---|
| | **Experimental** | **Organization** | **Professionalizing** | **Empowering** |
| 1. Educative base | Re-education | Re-education or training | Reflective practice | Consciousness raising |
| | Enhancing social science or administrative control and social change towards consensus | Enhancing managerial control and organizational change towards consensus | Enhancing professional control and individuals' ability to control work situation | Enhancing user control and shifting balance of power; structural change towards pluralism |
| | Inferring relationship between behavior and out - put; identifying causal factures in group dynamics | Overcoming resistance to change or restructuring balance of power between managers and workers | Empowering professional group; advocacy on behalf of patients or clients | Empowering oppressed groups |

| | Social scientific bias, researcher focused | Managerial bias or client focused | Practitioner focused | User or practitioner focused |
|---|---|---|---|---|
| 2. Individuals in groups | Closed group, controlled, selection made by researcher for purposed of measurement, inferring relationship between cause and effect | Work groups or mixed groups of managers and workers, or both | Professional(s) or (interdisciplinary) professional group, or negotiated team boundaries | Fluid groupings, self - selecting or natural boundary or open/closed by negotiation |
| | Fixed membership | Selected membership | Shifting membership | Fluid membership |
| 3. Problem focus | Problem emerges from the interaction of social science theory and social problems | Problem defined by most powerful group; some negotiation with users | Problem defined by professional in group; some negotiation with users | Emerging and negotiated definition of problem by less powerful group(s) |
| | Problems relevant for social science or management interests | Problem relevant for management/social science interests | Problem emerges from professional practice or experience | Problem emerges from members' practice or experience |
| | Success defined in terms of social sciences | Success defined by sponsors | Contested, professionally determined definitions of success | Competing definitions of success accepted and expected |

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| | Defined in advance | Defined in advance | Defined in situation | Defined in the situation based on values clarification |
|---|---|---|---|---|
| 4. Change of intervention | Social science experimental intervention to test theory or generate theory, or both | Top down, directed change towards predetermined aims | Professionally led, predefined, process led | Bottom up, undetermined, process led |
| | Problem to be solved in terms of management aims | Problem to be solved in terms of management aims | Problem to be solved in the interests of resolved of research based practice and professionalization | Problem to be explored as part of the process of change, developing an understanding of meaning of issues in terms of problem and solution |
| 5. Improvement | Toward controlled outcome and consensual definition of improvement | Toward tangible outcome and consensus definition of improvement | Toward improvement in practice defined by professionals and on behalf of users | Toward negotiated outcomes and pluralist definitions of improvement account taken of vested interest |

| 6. Cyclic processes | Research components dominant | Action and research components in tension; action dominated | Research and action components in tension; research dominated | Action components dominant |
|---|---|---|---|---|
| | Identifies causal processes that can be generalized | Identifies causal processes that are specific to problem context or can be generalized, or both | Identifies causal processes that are specific to problem or can be generalized, or both | Changes course of events; recognition of multiple influences upon change |
| | Time limited, task focused | Discrete cycle, rationalist, sequential | Spiral of cycles, opportunistic dynamic | Open ended, process driven |
| 7. Research relationship, degree of collaboration | Experimenter, or respondents | Consultant or researcher, respondent or participants | Practitioner or researcher, collaborators | Practitioner researcher, or co- researchers, or co-change agents |
| | Outside researcher as expert or research funding | Client pays an outside consultant- "they who pay the piper call the tune" | Outside resources or internally generated, or both | Outside resources or internally generated, or both |
| | Differentiated roles | Differentiated roles | Merged roles | Shared roles |

Action researchers use either qualitative or quantitative methods, or both, depending on the type of action research that is applied by the researcher. Almost all action research uses qualitative methods. Meyer (2000) suggested that confidence in the trustworthiness of the data collected in action research can be accomplished through triangulation, reflexivity, and member checks. Triangulation consists of data triangulation, investigator triangulation, theoretical triangulation, methodological triangulation, and multiple triangulations (Foss and Ellefsen, 2002). The use of quantitative data demonstrates validity and reliability in data collection, while using both quantitative and qualitative data demonstrates the rigor and trustworthiness all steps of the action research process.

**Why is action research important?**

Health is important for all aspects of human life; however, many health problems cannot be solved with biomedical knowledge alone. Action research usually involves the sharing of ideas and knowledge between researchers and participants that are confronted with problems in real situations. While health care providers, which include physicians, nurses, psychologists, pharmacists, nutritionists, etc., possess a wealth of biomedical knowledge, they alone or in collaboration cannot solve all health problems. To achieve successful solutions, clients, with their experiences and knowledge of their lives, must also participate and share, as stakeholders, in solving problems with the health care team.

Action research provides opportunities for clients to express their feelings, thoughts and needs, so that effective treatments and solutions to health problems can be achieved. Therefore, unlike qualitative research, which cannot represent in generalization and depend on user, action research focuses on the participants, stakeholders and researcher. Furthermore, unlike quantitative research, this occurs in controlled settings, and is driven by the researcher; action research occurs in real life contexts and is conducted with the agreement and commitment of stakeholders. Action research is therefore, more likely to achieve solutions that are sustainable and beneficial to those involved.

**Success stories using action research**

Action research has been used successfully to develop health care practice in many areas, such as nursing and primary health care, hospital organization, health promotion, and general medical

practice. Morrison and Lilford (2001) have described practical examples of the use of action research in health services in general medical practice, hospital inpatient medical services, hospital nursing, hospital organization, and health promotion, while Hampshire (2000) noted Donabedian's success in quality assurance programs in health care. There are many successful stories of the action researches in hospitals and community settings. For example, *"Development of Transitional Care Model for the Elderly with Chronic Illness"* demonstrates successful outcomes for learning patients and care givers (Teeranute, 2005). *The KwaZulu – Natal Health Promotion Model* is a successful project that creates the health promotion model though emancipation knowledge, empowerment of participants and action for change. (Uys, Majumdar, & Gwele, 2004)

**Ethical consideration in action research**

Action research is a process that involves lifestyle in each context. Ethical issues enter into all phases of action research, so researchers should be sensitive to ethical issues in situations involving participants and be able to recognize an ethical issue when it emerges so that it can be taken into consideration

(Kelly and Simpson, 2001; Herr and Anderson, 2005).

Action researchers must be aware of human rights and welfare and must take responsibility for the protection of participants' anonymity and confidentiality. Furthermore, researchers must accept and respect the decision of participants to take part or withdraw from the research process. Meyer (2000) noted that "action researchers need an ethical code of practice to be negotiated between participants and the action researcher, and action researchers need to be aware of participants' values, beliefs and power relations and sensitively work between differing agendas." Action researchers should do their best to foresee the things their participants might confront in the research process and impose the least amount of risk to the participant (Herr and Anderson, 2005).

**Conclusion**

Action research is the process of knowing, creating knowledge, and leading to change in real situations. Action research requires imagination, thought, collaboration, and participation between the researcher and participation to bring about sustainable change and improve health care practice. It therefore incorporates the concepts of

participation, equality, collaboration, reflection and emancipation. We summarized the typology of action research based on the philosophy that there are three typologies: scientific technical action research, interpretative collaborative action research, critical participatory action research. However, the best typology depends on the researcher's underpinning philosophy and the research questions.

Ethical issues are an important component of action research because it is carried out in real-world circumstances. Researchers accept, respect, and negotiate with all participants involved in the action research process, and accept responsibility for maintaining confidentiality.

Action research focuses on working with people that are stakeholders in the contexts, to assess and identify problems, implement the research process and ultimately, to achieve change that is sustainable. Health care providers should work as multidisciplinary healthcare teams along with clients to create opportunities for clients to express their feelings, thoughts and needs, within a democratic environment, so that effective treatments and solutions to health problems can be achieved.

Action research has been an important research methodology for health care practice. Current health care practices call for increased collaboration between interdisciplinary health professionals and stakeholders, in an environment of equality. Action research is a bridge in the theory-practice gap and provides a feasible means of conducting research in real situations. The results of action research benefit all stakeholders, including researchers, theorists, practitioners, and patients.

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