# Thinking 'Research' – key concepts

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a primer for capacity building in research
by non government mental health and
drug and alcohol agencies

**NADA**
network of alcohol & other drugs agencies

**mhcc**
mental health coordinating council

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> Please consult the press and MHCC and NADA websites for
> research funding opportunities for 2007
> or visit www.cmhdaresearchnetwork.com.au

# Contents

# Introduction

Non-government organisations (or community organisations) in the mental health and alcohol and other drug fields are usually heavily committed to providing front line services for people living with these issues. This leaves little if any time to invest in research and development (R&D) or research evaluation and development (RED) for strategic program and knowledge development. Indeed, funding for the latter purposes has never before been available for mental health and alcohol and other drug NGOs within recurrent funding streams. However, ad hoc funding can be available under National or State health strategies, one-off opportunities, and NGOs themselves can raise funds for their own research work. Consequently, there is need to ensure readiness and to turn NGO executive and staff attention to research and development thinking and to managing research.

This read-at-a-glance primer is one of three in a series, which aims to assist community organisations in developing readiness to design, finance and manage a research program. The series titles are:

1. Thinking 'research'

2. Developing and refining your research question

3. Leading and managing your research program

The series also hopes to assist NGOs to prepare for fostering successful relationships when commissioning research or when initiating partnerships with research organisations.

The first in the series introduces key concepts and definitions. It acts as a glossary so that parties to research partnerships can speak a common language when meeting together. It also flags some issues about research credibility when undertaken specifically by non-government agencies.

It should be read in conjunction with the other two primers.

# Definitions: overarching concepts

There are different research philosophies and traditions based on different conceptions of social reality. These impact on definitions. Definitions reflecting these differences will be offered where possible and references provided.

## Research

'The organised quest for new knowledge based on curiosity or perceived needs. Research may consist of systematic empirical observation or hypothesis testing and the use of pre-planned research designs'. (Last, 1995 p.146)

'A systematic investigation of a phenomenon. It is the process of searching, investigating, and or discovering facts by using the scientific method. Social research is research about social and behavioural phenomenon. All research studies include 5 elements: 1) a specified purpose, 2) a rationale for the study, 3) a specified method, 4) analysis of data and 5) a conclusion' (Holosko, 2006 p.7).

The key concept is that research can be done for its own sake – for the sake of knowledge development, to satisfy curiosity, enquiry. It is thus essential to 'learning organisations' that research is facilitated, in addition to quality improvement strategies and program evaluations.

## Research question

All research starts with the research question. Methods are selected that have capacity to answer the question.

## Evaluation

'The process of providing information designed to assist decision-making about the object being evaluated' (Owen, 1993).

Essentially, evaluation occurs at all phases of program or policy development and implementation. Evaluation uses research methods but for the purpose of making a judgement about worth or a decision about continuing or redesigning a program or policy. Lots of things can

be evaluated: planning, programs, policies, organisations, products and individuals. There is little difference between it and 'research'.

'Program evaluation is the process of delineating, obtaining and disseminating information of use in describing or understanding the program, or making judgements or decisions related to the program' (Owen, 1993).

Owen continues: Purposes of evaluation have been described:
- Enlightenment
- Accountability
- Program improvement
- Program clarification
- Program development
- Symbolic reasons

'Evaluation is the process that attempts to determine as systematically and objectively as possible, the relevance, effectiveness, impact of activities in the light of their objectives. Varieties of evaluation include: evaluation of structure, process, impact, outcome'. (Last 1995).

Data

A collection of items of information. Singular is datum, plural is data. (Last, 1995 p.42)

Dissemination

Dissemination includes at minimum, diffusion of the findings of the research. NHMRC definitions include in the definition, the uptake of the information or its use. The goal however is to place the knowledge in a publicly available and published format as the output of a research project. It is also true of evaluation projects. Sometimes this is referred to as 'research transfer' meaning, a transfer of the knowledge to others in the field or with an interest. Disseminating that knowledge is an ethic of both research and evaluation programs and it is expected that publicly-funded research achieve some form of research output or transfer. Disseminating findings can be through the following:

- an internal report to funders of the research or stakeholders;
- mainstream publishing in the academic literature to ensure it is retrievable on international bibliographic data bases – this might need a bit more explanation ;
- conference papers;
- summaries in newsletters

- communicating results through meetings, public meetings, mainstream press (so long as the timing does not jeopardise the potential to be published in academic journals)
- referencing the study in program materials and policies;
- ensuring study participants are provided a brochure of summary results;
- website summaries (so long as the timing does not jeopardise the potential to be published in academic journals)

Knowledge utilisation

This term refers to the uptake of research findings in everyday practices in the field. It is related to the terms, 'evidence-informed practice' and 'evidence-based practice'. 'Dissemination science' is the field of research now spanning several decades that is concerned to ensure the uptake of knowledge in practice in efficient ways.

Quality improvement

Quality improvement has been called, 'a way of making efficient and effective use of scarce resources' (WHO, 2003). Quality improvement programs can sometimes be confused with 'research' or with 'evaluation'. For organisations to evolve and stay relevant and responsive, it is generally agreed that they need:

- Research and development programs
- Evaluation of new programs and existing programs
- Quality improvement programs

Quality improvement processes are usually integrated and continuous processes and mechanisms for anyone in an organisation to contribute to improving processes, impacts and outcomes of programs. They are often responsible for creating more ongoing and sustained change than R&D and evaluations. By contrast, research is once off.

Mechanisms for quality improvement may include adopting standards, policies and management processes, routine information gathering, consultation with consumers and service users, conducting needs assessments, accreditation, external visiting and feedback, training and development of the workforce, and or systematically redesigning a program or service when it requires too much reform for mere quality improvement.

Quality assurance usually involves standards and accreditation aimed to evaluate structure, process and outcomes of care (WHO, 2003).

Quality improvement aims to do this, plus to anticipate and prevent problems in organisations where managers and supervisors are proactive; and the organisational culture is one of responsiveness and empowerment of staff to participate and assume responsibility for problem identification and solutions (WHO, 2003).

Research and evaluation may be occasional rather than continuous and may be more in-depth. They provide inputs to quality improvement processes, planning and thinking in an organisation.

# Traditions and types of research

**Policy research**

**Historical research**

**Third sector research** – focus is on non-profit organisations and their structures, business processes, organisation and management.

**Health services research** and **Health services management research** (includes health economics, health administration, health planning, organisational change, health utilisation research, treatment uptake by populations, practices of health professionals, practices of consumers, dissemination science of new treatments and programs, health education, consumer informatics, attitudinal research, health outcome research).

**Social research** (various social science disciplines including historical and policy research above, and including psychology, sociology, political science, anthropology, consumer research, marketing, communications, business, linguistics. Overlaps with much health services research, program evaluation in the human services, and public health and health promotion research themes above, and including qualitative, quantitative and mix method research).

**Epidemiological research** – a public health research focus on course, outcome, spread of, incidence and prevalence of disease or protective factors and health status in populations. It also evaluates interventions.

**Social and behavioural epidemiological research** (shares much in common with social research with a focus on the spread of norms and behaviours in populations.

**Social pharmacy** (a branch of pharmacy staffed by social scientists and sociologists who study factors influencing how and why people take medicines, difficulties experienced, health beliefs influencing the use and uptake of medicines)

**Educational research** (evaluating workforce or client education)

**Biomedical research** (eg psychopharmacological research, physiological, neurosciences and psychiatric treatment research etc)

# Study design – key public health and social research methods

| THREE MAJOR CATEGORIES | RESEARCH METHODS | FAMILIAR EXAMPLES |
|---|---|---|
| **1. Literature reviews** | Narrative review | Initial conceptual reviews |
| | Systematic review with meta-analysis of quantitative studies | • Cochrane Collaboration Databases of Systematic Reviews |
| | Systematic review with qualitative and quantitative meta-analysis | • Evidence-based clinical practice guidelines<br>• Some best practice guides<br>• Policy development |
| **2. Observational Studies**<br><br>also called 'descriptive studies' | Case study | • Study of an organisation implementing a pilot program<br>• Study of one person leaving a rehabilitation setting |
| | Census | • ABS Australian census |
| | Epidemiological survey (also called 'cross sectional' survey design) | • National Alcohol and Drug Household Survey<br>• NSW Child Health Survey |
| | Social survey | • Opinion polls, attitude surveys & market research |
| | Cohort study | • Reading amongst $6^{th}$ graders 1995-2000 |
| | Panel design survey | • UK longitudinal human development series 'Seven Up' on children growing up |
| | Illness narrative | • Consumer recovery research |
| | Documentary analysis | • Advertising classification |
| | Content analysis | • Client file audit, book review |
| | Discourse analysis | • Consumer critiques on stigma |
| | Focus groups | |
| **3. Quasie Experimental and Experimental Studies** | Comparison group survey | |
| | Case control study (eg those with headaches are compared with those without) | • Headache amongst men<br>• Investigating an apparent cancer cluster |
| | Controlled trial | • Experiment without randomising sample |
| | Randomised controlled trial | • Experiment with randomising |
| | Multi-site field trials | • WHO multi site experiments with numerous research teams in multiple countries |

# Brief definitions of some research methods

Because different research methods are appropriate to different kinds of research question, definitions of key methods will be provided here. Mixed method research is also common in the health and human services fields.

### Action / participatory research

A qualitative research method that identifies a social problem or concern and seeks information about them by collaborations with individuals or organisations (Holosko, 2006). Action research alternates between action and critical reflection, which consists of review and planning.

### Case study

Examining individual units comprising 'cases' of individuals, groups, families, settings, interventions, communities or cultures (Holosko, 2006). The 'case study' entails descriptive, naturalistic research of one or more types of phenomena. In social science the case study has been defined as 'a method of inquiry associated with a commitment to the intensive study of a single unit, a series of units, or a process, typically using qualitative techniques... to clarify and analyse the meanings that some problematic phenomenon had for the participants in a round of social interaction' (Davies 1998: 496).'The major virtue of the case study is that it retains a high degree of faithfulness to real life processes through its collection of extensive, rich data'....In the social and health sciences it is now more understood as intensive observation, participant interviewing and it can include many research methods brought into one research deliverable. It can combine survey, observation, documentary records, diaries, conversation records, ethnography and observation (Davis 1998).

### Case control study

An observational epidemiological study of persons with a problem, behavior or outcome of interest, and a suitable control (comparison group) of persons without the problem or outcome of interest.

Observations retrospectively over time

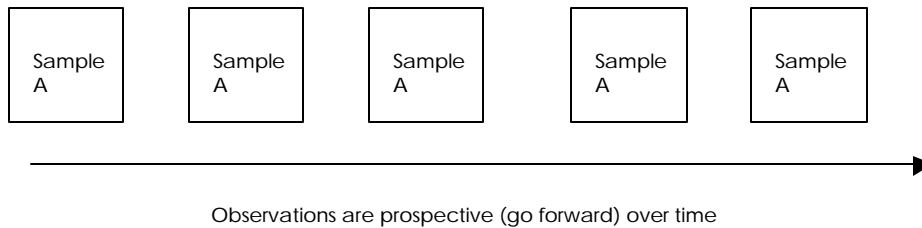| | |
|---|---|
| | Sample A with problem |
| | Sample B without |
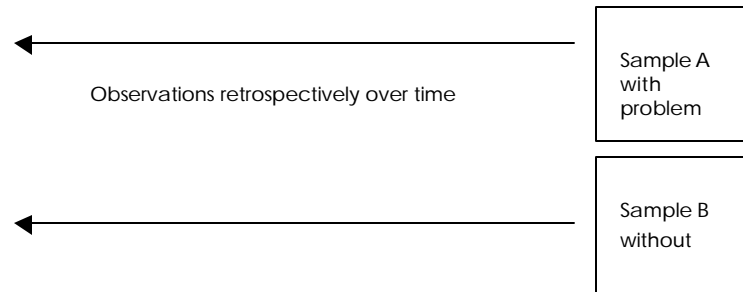
The past history of those exposed to a potential risk factor is compared between the cases and controls. Controls must resemble cases in terms of age, sex but need not have the problem of interest. These studies are retrospective since they begin once the problem has occurred. The study looks back from the outcome to examine causes.

An example would be comparing young people who smoke with those who don't to determine the risk relationships associated with the onset of smoking in young people. These risk relationships might be family size, obesity, self-esteem and so on.

Cohort study

This is a type of social science, education, developmental psychology, education and public health research. A cohort study follows the same 'cohort' or numerous cohorts (groups) of individuals through time to see outcomes that develop such as a disease, recovery, human development, marriages continuing etc. Routine consumer outcome monitoring is an example of a cohort study within an agency since it studies the wellbeing of clients over time.

Another definition calls this method an analytic method for epidemiologic study where subsets of a defined population can be identified who are or who in future may be exposed or not exposed, or exposed in different degrees to an occurrence, disease, behaviour or outcome. Large numbers may be observed for years. Incidence rates are counted in different groups with different exposures. Risk relationships are identified. The definition points out that these are sometimes called 'longitudinal study', follow-up study', 'incidence study' or 'prospective study' (Last, 1995).

| Sample A | Sample A | Sample A | Sample A | Sample A |
|---|---|---|---|---|

→

Observations are prospective (go forward) over time

## Ethnography

A qualitative method that studies cultures to learn about their interactions, values, meanings, behaviours, language, interactions, meaning and or worldview (Holosko, 2006).

## File audit using content analysis, discourse analysis and documentary analysis

This method (detailed interrogation of the written content of client files with consent obtained from clients) can help determine a profile of the existing service users and the practices of an agency. It can help form a detailed profile of services actually delivered, as opposed to what is thought to be delivered, the responses of clients, client outcomes, length of participation in the agency, why the person left the agency, and can provide a needs assessments of what services individuals and groups already get vs what is missing. Not all service provided is documented however, so the findings may be tentative or partial. It is a good first step in an agency without routinely collected health outcome monitoring.

## Focus Groups

Focus groups can help the development of a new program, can help determine what is acceptable to a client group or to the workforce, can reveal attitudes or needs, or can be used to test out new materials that have been developed to obtain a response. They are more structured than a consultation.

Focus groups combine both interviewing and observation skills and allow the observation of a large amount of interaction on a topic in a short time. Its advantage over individual interviewing is that it enables group interaction, verbal and non-verbal information that can uncover important constructs. It can be more efficient. They evolved from group therapy and psychiatry in the 1950s (Quine in Kerr et al, 1998).

Grounded theory

The systematic generation of data based theory to develop explanations, hypothesis, concepts, typologies, meanings and or descriptions of phenomena (Holosko, 2006).

Experiment

Experiments answer the question, what works or does this program work? Investigators deliberately control and manipulate the conditions that determine the events in which they are interested. They make a change in the value of one variable (independent variable) and observe the effect of that change on another variable (dependent variable). In 'quasie experimental studies' the researcher may be unable to control all the variables, such as who is selected in the group under study and may not be able to randomise. Experimental and control groups exist (Cohen & Manion, 1994). Controlled trials and randomised controlled trials are experimental research.

Naturalistic study

This is a term used to describe an observational, descriptive study over time of a program unfolding. No explicit intervention is given but organisations or groups or individuals are observed naturally carrying out their business or practices and this is documented in a detailed way. It may not be a case study necessarily. The term, *natural history study* can sometimes be used, which is defined as a study generally longitudinal, designed to yield information about the natural course of a disease or a condition. (Last, 1995 p.111)

Needs assessment and health profiles of a community or population

The population can be geographical or a group with shared sociodemographic characteristics (eg homeless people). Needs assessments are comprehensive and enquire into where intervention is needed by the community or population. Intersectoral working skills are needed to conduct a profile of a population, a defined sub group in the population or a community using needs analysis. Disease registration databases, local government information, census data over time, one-off survey, community characteristics, health service usage, and health outcomes may all be involved in a needs assessment. (Sainsbury in Kerr et al, 1998).

Participant observation

Qualitative research method observing activities, events, people, interactions, meaning, and or worldview through the cultivation of personal relationships (Holosko, 2006).

Phenomenology

A qualitative method to describe and understand the lived experiences of individuals. 'Illness narrative' is a form of sociological phenomenological research and is also called narration, or the detailed narrative accounts of individuals, events, themes, life histories, and their meanings (Holosko, 2006).

Survey or social survey

A method of collecting information directly from people about their ideas, feelings, health, plans, beliefs and social, educational, and financial background. It can be self-administered or interview administered in person or over the telephone (Fink & Kosecoff, 1998). Cross sectional surveys include household epidemiological surveys, opinion surveys, market research and so on and collect information only once. They provide a snap shot of reality in time.

Survey design

The way in which your survey environment is controlled or organised. Increased control means increased credibility of results. Variables to control during a survey include:

1) when is the survey given
2) how often is it given
3) number of groups it is given to

A census is a survey but includes all the people in the group or population rather than a sample of it. If all NGOs are surveyed, it may be a census if all of them respond.

Systematic literature review

Systematic literature reviews summarise relevant, valid studies to find out what is known accumulatively from experimental research. They provide the highest quality evidence on the effect of human service interventions. Steps are: define the objective, search exhaustively to locate all relevant studies, appraise the quality of the studies, data extraction from the studies, display and analyse the data using a

statistical meta-analysis, The objective is to find out the magnitude of the direction of the effect of treatments or programs (degree of statistical significance) once all the smaller studies are combined (Irwig, 1998; Commonwealth of Australia, 2000). Evidence-based practice guidelines and clinical practice guidelines are often summaries of numerous systematic reviews.

Triangulation

The use of several methods of research to achieve completeness in understanding a research issue. Different facets of an issue are sought so that information adds to completeness of interpretation (Quine & Taylor in Kerr et al, 1998).

Workforce profiling or workforce needs analysis

This would be a survey or the secondary analysis of existing information (such as resumes or workforce databases) to find out the education, training and experience, practices, practice preferences and interests of the workforce in relation to a particular aspect of community need or practice (such as readiness to provide CBT, capacity to provide recovery oriented programs etc).

# Other issues

## Should NGOs 'do' research?

Presently there is a predominance of biomedical research available in the mental health and alcohol and other drug fields. The emphasis has been biomedical treatment efficacy research. There is little 'real world' or effectiveness research about how things work in the everyday program and project setting. There is also relatively recent (and limited) comorbidity research from available treatment efficacy trials. So NGOs, as community-situated settings, are novel research settings. Their findings will provide the key type of research to inform future practice within NGOs and will inform partnerships with NGOs in the wider human services.

In a knowledge society all industries need their own research to be credible and responsive. Notwithstanding that NGOs are principally practical human service delivery agencies, doing at least some research is important to sustainability and strategic direction setting. It will assist the NGO to be clear about their practices and purposes and to evaluate their work. It is generally accepted as important to have academic-based research from 'disinterested' external investigators who may do research about an organisation with the organisation's knowledge and consent and hopefully, their participation. But it is equally important to hav e industry-based research and development by NGOs themselves, since NGOs will ask questions relevant to their own practice and practice improvement.

The latter can be investigator-driven from within the organisation or external to it, but it may be a research program that is financed by the NGO itself because it may cover an area or topic of strategic importance to the NGO. It may be commissioned by the NGO for it to be carried out by an external party or resourced from within the NGO, or resourced through partnerships with others.

## Can NGOs produce reliable 'research'?

The usual research ethics safeguards should apply to research funded by, funded to, or carried out by or commissioned by NGOs. The same honesty of findings is required in publishing findings. There is a US and North American debate about the extent to which self-interest of

'interest groups' interferes with their capacity for rigorous research. It is possible that the same concern about 'self interest' applies to all other institutions and settings that undertake research. NGOs need to be mindful that research integrity and credibility is vital to the future of the NGO and its reputation.

## Disseminating research findings

All research projects should have governance that ensures that disseminating the research is planned in advance. That is, the project does not wind up until a knowledge yield is achieved and is published, even if the results are only available internally. The ideal is that external mainstream publishing be achieved in journals, w hich are listed in international bibliographic databases. Ensuring research participants are informed of the study findings is also an ethical requirement.

Also see primer, 'Leading and managing your research program'.

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