

The Intervention Research Model in the Human Sciences: application to practice.

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Abstract

To present the Intervention Research Model as one way of doing research in the development, application and evaluation of programmes in the human sciences in order to add to existing technology in a particular subject.

Methodology:

The Intervention Research model is intended to develop specific technology that can contribute to the field of study of subjects such as Social Work, Nursing and Psychology. The focus of this model is on the conceptualising, development and the eventual evaluation of programmes to enhance or maintain the well-being of individuals, groups or communities. Intervention researchers should need to think and conceptualize afresh in designing new interventions, seeing that there is a need to identify and develop new and conceptually relevant interventions that can contribute to the science of a particular subject (Roestenburg & Strydom, 2021: 463).

Key words: Intervention, intervention research model, programme, human sciences, practice.

This model grew from the collaboration of two pioneers, namely Rothman (1980) and Rothman & Thomas (1994). This model has been refined by many authors such as Holman (1996), Nutbeam (1996) and Fraser et al. (2009). These authors' efforts in adapting the Intervention Research Model has an intention towards more pragmatic research focused on reality. The focus of Intervention Research may be on improving an existing programme, or on designing an intervention which might take systematic work over an extended period of time while repetitive testing and evaluation of a developed intervention takes place (Roestenburg & Strydom, 2021: 465-466). It is important to remember that the phases of the process do not rigidly follow each other. Researchers have to realise that some activities of a phase continue after the start of the next phase or that one has to go back to an earlier phase for instance in the case of difficulties encountered or if new information is obtained.

The Intervention Research Model:

The model has six phases with certain steps. The six phases are: problem analysis and project planning, information gathering and synthesis, design, early development and pilot testing,

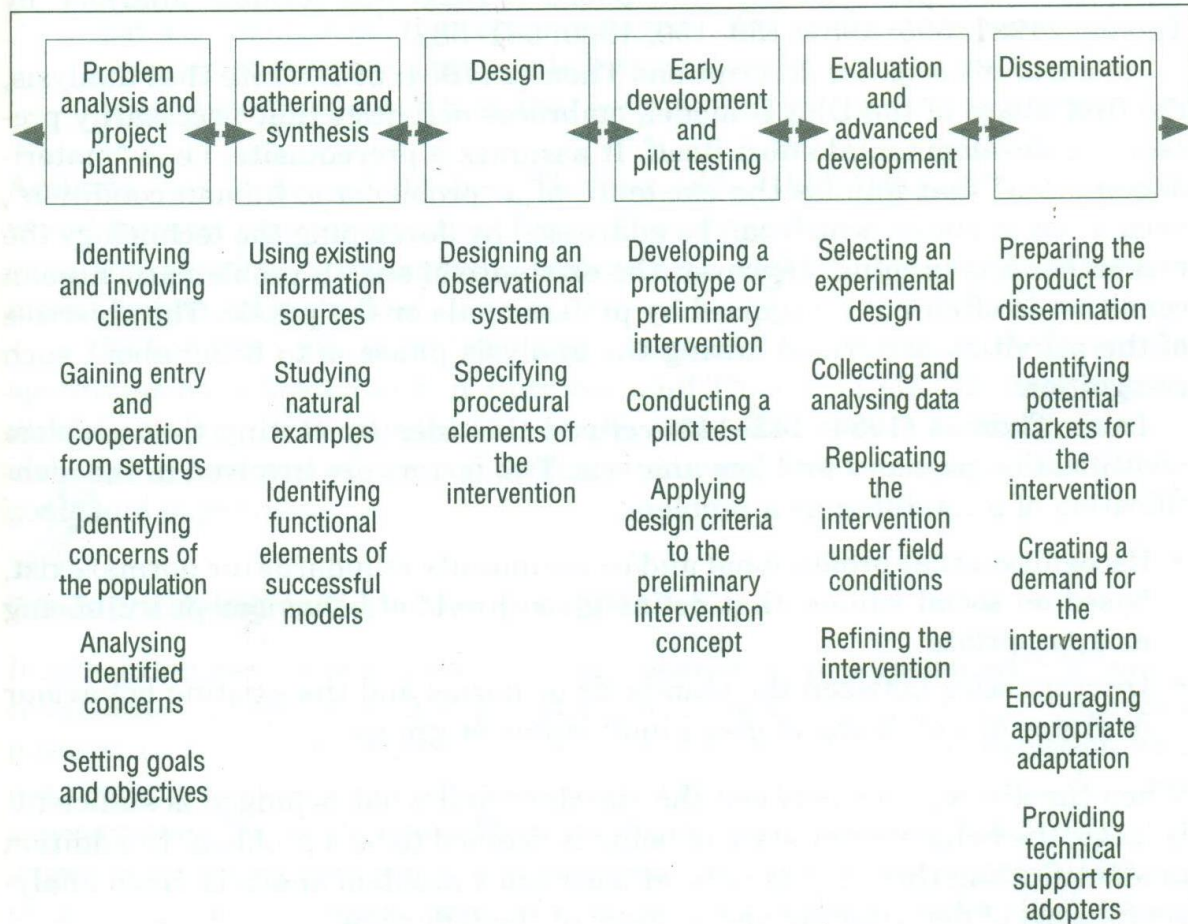


Figure 25.1 Phases and operations of intervention research

The various phases and steps of the Intervention Research Model will be discussed in condensed format. Examples from previous studies of Master’s and PhD students will be given in order to explain the phases of the Intervention Research Model in a more pragmatic manner.

- Phase 1: Problem analysis and project planning

The social problem that requires a solution must firstly be described in a clear and concise manner. The following steps can be delineated in this phase:

* Identify and involve clients

A population should be chosen to do the research on and then do a proper preparation and initiation into that population that experiences a particular problem. The gaining of entry and the building of relationships with a community or setting is important to achieve openness and trust. Ananias (2014) did her study on social work support groups with informal caregivers to prevent elder abuse and neglect in a certain region of Namibia. She did a needs assessment on informal caregiving situations and how it may lead to elder abuse and neglect of older persons in this specific population. Data was collected through in-depth interviews with professional and community leaders, as well as focus group discussions with older persons and informal caregivers.

* Organisational collaboration

The collaboration with the setting and specific key informants are essential to make the research a worthwhile process. Involving the organisation from the very start of the process assists both participants and the researcher to see the possible benefits of the study. In this way everyone involved in the process can take ownership of the total project (Roestenburg & Strydom, 2021: 468). All the students mentioned in this presentation were either known to the community, worked in the specific community and have a special interest in the particular problem they identified. All involved parties were involved from the start of the process and proper entrance into the settings were gained from gatekeepers and the community as such.

* The identification of the concerns of the population

Researchers should aim at developing an optimal understanding of the real concerns in the community. A thorough multi-dimensional exploration and investigation of the total problem should be done (Roestenburg & Strydom, 2021: 469). By taking time to gain total immersion and involvement in a community should always be a priority, although the researcher may be inclined to start on the actual research. All of these students did a proper analysis of the community under study in order to gain a clear understanding of the concerns of the population.

* Analysing the identified concerns

The analysis of the problem boils down to weighing the existing knowledge on the problem and the community as such against the existing empirical evidence. Roestenburg and Strydom (2021: 469) recommend that the analysis of the identified concerns be done by way of a comprehensive report addressing the various dimensions of the situation, the implications and what might happen if the problem is not addressed. All candidates spent time on analysing the identified concerns in the community before they embarked on the actual research process.

* Setting goals and objectives

Research questions should be stated that assists in the formulation of an overarching goal and fitting objectives. This is of major importance because it gives direction and focus to the total project. In the case of Mokwele's study (2016) on a social work programme for community caregivers to facilitate HIV and Aids patients' adherence to antiretroviral treatment an overall question with 6 sub-questions were formulated. An aim and 6 objectives were accordingly formulated that fits 100% on the questions. In Boshoff's study (2015) on trauma in the South African Police Service: a psycho-social therapeutic programme 5 questions were stated that led to the overarching aim and 5 objectives for the study that fits the questions in the correct order.

- Phase 2: Information gathering and synthesis

The gathering of information on similar existing programmes in other contexts is important. In order to achieve this aim a thorough literature study must be done on all possible interventions developed over a certain period of time. These interventions need not be in the particular field of study of the current researcher, but any other programme can assist in gaining knowledge on developing and evaluation of a programme. The following steps can be delineated:

* Using existing information sources

Various sources can be utilised for gathering information. Literature is an obvious choice, but one should look beyond literature towards conversations with developers of existing

programmes and looking into the perceptions of community members in handling a particular problem in their community. All of the candidates embarked on studying all appropriate literature on the topic as well as to familiarise themselves with the natural situation in the field.

- * Studying similar existing or associated interventions

To study both successful and unsuccessful interventions can assist in making sure not to make the same mistakes and to improve on previous interventions. Existing interventions can assist in designing an improved programme and to adhere to the requirements of science, namely to build on previous studies. Candidates did study examples of what work and what not, in order to make sure not to make the same mistakes as in other programmes.

- * Identifying functional elements of successful programme

After the previous step has been completed, critical features of different practices that had previously been used to address the problem in question, should be investigated. Some elements of existing programmes might be useful in designing the new programme and might be adapted to suit the new programme. All of the students endeavoured to identify elements from other existing programmes that might even be useful and adaptable for the purposes of their own studies.

- Phase 3: Design

The design of an intervention is the phase where one's creative ideas are unpacked and integrated with what has so far been done. The following steps can be described:

- * Design a prototype of intervention options

The first draft of the programme should consist of a series of concrete, written steps that should include measurable elements to describe the possible outcome of the intervention (Roestenburg & Strydom, 2021: 474). One candidate developed a social work support group work programme for informal caregivers of older persons (Ananias, 2014: vi). An eight week programme was developed based on empirical data and a comprehensive literature review. Topics such as the process of aging, handling of difficult caregiving situations, caregiver stress, self-care of the caregiver, elder abuse and neglect and finally caregiver grief and loss (Ananias, Strydom & Ellis, 2015: 224).

- * Design an observational system

The designing of an observational system refers to the philosophy or ways of measuring the change brought about by the intervention. Measuring instruments should be built into the programme, whether it is quantitative or qualitative or both. At this stage it is advisable to submit the preliminary programme to a panel of experts or hold a focus group discussion with a selection of experts. In many ways the validity, reliability or trustworthiness of the initial programme can be improved. All the candidates had qualitative and quantitative instruments built into their programmes to evaluate on either a weekly and/or before/middle/after basis.

- Phase 4: Early development and pilot testing

In this phase there is also a number of steps to be followed.

- * Develop a preliminary intervention

Once the initial programme has been agreed upon by way of evaluation by a panel of experts, the programme can even be presented to a number of prospective participants in order to give

their impressions of the clarity of the content. All of the students had their preliminary programme evaluated by either a number of experts or people similar to the clients to be involved in the programme.

- * Conduct a pilot test

A number of pilot tests can be applied where participants are subjected to the programme in order to gain their opinion on what should change and what can stay the same. By doing pilot tests the efficacy and quality of the intervention can be determined. By doing continuous amendments to the programme, an optimally effective final intervention can be achieved. The major aim of Intervention Research remains to develop new technology for a specific subject that can be adapted, re-used and re-evaluated by other researchers.

- * Apply design criteria for the intervention

Certain design criteria should be applied to gain an appropriate intervention in the end. Some of these criteria can be the following: are the right people using the programme, are all staff members properly trained in the content and aim of the intervention and how compatible are the content of the programme with local values.

- Phase 5. Evaluation and advanced development

The evaluation and advanced development phase of the Intervention Research Model also has a number of steps.

- * Select an experimental design

The design should assist in achieving causal relationships between the intervention and the behaviour change that took place. An adequate control group, or comparison group, is another way of achieving and measuring the required outcome. One can even use a three-month post-test evaluation of both groups to ascertain whether the foreseen outcomes have been achieved. The study of Ananias (2014) was done in the framework of the exploratory mixed method approach, meaning that qualitative data was explored before attempting to do the quantitative measurements (Fouche & Strydom, 2021: 431-432). For Ananias's study (2014) evaluation was done by using certain standardised measuring instruments, as well as an additional number of open-ended questions to collect qualitative data.

In the case of Tshesebe (2013) an existing programme was evaluated, namely the community based care and support services for the elderly of the Department of Social Development. The evaluation was done in a qualitative fashion in order to determine the quality of services rendered to older persons. This was done by gaining the viewpoints and perceptions of 3 groups of participants, namely the older persons who are the beneficiaries of the service, members of the management committees of the community based organisations and the officials of the Department of Social Development (Tshesebe & Strydom, 2016: 2). In this case only phases 5 and 6 of the model were executed.

Boshoff (2015) did his study in an exploratory sequential mixed methods design and followed the total process of the Intervention Research Model (Fouche & Strydom, 2021: 431-432). Jansen van Rensburg (2012) completed her study on the development and evaluation of an empowerment programme for both the retired volunteers and the staff members of a service centre for the aged. She endeavoured to study the topic from both the viewpoints of the volunteers and the staff members that are in direct contact with the clients.

- * Collecting and analysing data

The specific intervals of collecting data should be carefully planned. By using independent evaluators to evaluate the gathered data, objectivity, reliability, validity, replicability and trustworthiness can be enhanced to achieve the highest scientific standards.

- * Replicate the intervention under field conditions

Interventions should be effective in a variety of real-life situations and for any programme to be effective and worthwhile in one context it should also be effective in most other similar situations (Roestenburg & Strydom, 2021: 480).

- * Refine the intervention

The intervention should eventually become adaptable for use in a variety of contexts. The repeated application of a programme shows its cross-cultural and wider application – in this way adaptation to the language, cultural context, content and intervention methods may produce the desired behaviour changes in the full spectrum of possible clients.

- Phase 6. Dissemination

Dissemination refers to all possible efforts of increasing the adaptation of a newly developed programme after testing and refinement has been concluded. The following steps can be discussed:

- * Prepare the product for dissemination

In this regard the following can be mentioned: choosing a name, decide on the price and setting standards for the utilisation of the intervention. This means that all protocol for publication, in the widest sense of the word, should be followed. For instance, Ananias's (2014) total product in PhD format was disseminated in 4 articles of which 2 were published in accredited journals. Tshesebe (2013) disseminated her Master's thesis in 2 articles in accredited journals. Boshoff (2015) disseminated his PhD in 6 articles of which 4 were published. Jansen van Rensburg (2012) disseminated her PhD in 5 articles of which all were published.

- * Identify potential markets for the intervention

Legal advice should be sought with regard to ownership of a programme right from the start of the process in order to avoid conflict at a later stage in the process. By publishing a programme for instance in an accredited journal might achieve the widest possible application of the programme.

- * Create a demand for the intervention

Potential users of a newly established programme must be made aware of the benefits of a new technology, by way of for instance modelling, sampling and advertising.

- * Encourage appropriate adaptation

Intervention researchers should make prospective adopters aware that modification of the intervention can be done to the original programme. In this manner the new technology can be even further utilised. The original developers of a programme should, however, monitor the use of the intervention in order to meet established standards.

- * Provide technical support for adopters

The developers of the original technology remains the experts concerning the particular intervention and therefore technical support in the implementation of the product should be given.

Conclusion:

Intervention research is a multi-dimensional and sequential effort to develop and evaluate interventions for application in a wide variety of situations and in many fields of practice, both referring to empirical research and practice. After supervising many PhD and Master's students on the Intervention Research Model it can be concluded that this model is ideally suited for the development, intervention and evaluation of most kinds of research projects in the social sciences.

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