Chapter 22

From evidence to policy, programmes and interventions

David Fergusson
Christchurch Health and Development Study, University of Otago, Christchurch

Stuart McNaughton
Woolf Fisher Research Centre, The University of Auckland

Harlene Hayne
Department of Psychology, University of Otago

Chris Cunningham
Research Centre for Māori Health & Development, Massey University, Wellington

Summary

• This chapter considers the issues that arise in the translation of research-based evidence into effective applications: policies, programmes and interventions.

• Three types of application are identified: universal applications targeted at all adolescents; prevention programmes targeted towards ‘at risk’ young people and their families; and interventions that focus on treating young people with problematic outcomes.

• The chapter then outlines the key elements of the Prevention Science approach including: (a) the use of meta-analysis and systematic review to identify effective programmes; (b) the importance of adequate pilot testing and programme development; (c) the use of randomised trials and other methods to assess programme efficacy; and (d) issues in taking programmes to scale.

• Consideration is also given to the issues that arise in the implementation of programmes including the importance of staff training, organisational factors, client factors, and cultural factors in maintaining programme fidelity and quality.

• The Prevention Science approach described above is compared with the Kaupapa Māori model and the differences between these approaches explained. A model (He Awa Whiria – Braided Rivers) for reconciling these different approaches is described.
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- Consideration is given to the training and workforce requirements that are needed to ensure greater utilisation of systematic (Western Science; Kaupapa Māori) approaches to policy development, implementation and evaluation.

1. Introduction

The preceding chapters provide a rich menu of recommendations about the ways in which application policies, programmes and interventions may be developed to improve the outcomes and circumstances of adolescents in New Zealand. Broadly speaking, these recommendations relate to three types of application [1]:

Universal policies that are applied to all adolescents. An example of this type of policy is illustrated by the recommendation in Chapter 20 that consideration should be given to raising the legal drinking age.

Programmes targeted towards ‘at risk’ young peoples or their families. These programmes are predominantly prevention programmes that seek to mitigate the risks for young people who are exposed to social, economic, educational, family or related challenges. Examples of this approach are provided by the home visiting and centre based programmes reviewed in Chapters 3 and 5.

Interventions that are targeted towards young people who have experienced problematic outcomes. Examples of these programmes include the cognitive behavioural treatments for depression, alcohol abuse and drug abuse reviewed in Chapters 16, 19 and 20.

While the present report reviews and recommends a wide range of policy options, the critical reader is entitled to ask two general questions about these proposals:

The first question is, “How can we be sure that the policies, programmes and interventions being recommended are, in fact, effective in addressing what they purport to address?”

The second and perhaps more important question is, “Will these policies, programmes and interventions work in New Zealand and, if so, what steps are required to ensure their successful implementation?”.

The focus of the present chapter is on addressing both of these issues. Specifically, the chapter reviews:

- The use of the Prevention Science Paradigm as a framework for identifying, implementing and evaluating policies, programmes and intervention;
- Kaupapa Māori perspectives on policy development, and programme selection and evaluation; and
- Reconciliation of Western Science and Kaupapa Māori perspectives using the He Awa Whiria (Braided Rivers) model proposed by Macfarlane.

2. The Prevention Science approach

With the rapidly growing body of knowledge about the prevention, treatment and management of human problems, a number of scientists have begun to focus on the question of how this body of knowledge can be translated to provide beneficial outcomes for people. This task is of high importance given that most scientific research is funded from the public purse and it is reasonable to expect that the knowledge purchased will add, in some way, to human wellbeing [2, 3]. Recognition of the need to translate scientific knowledge into effective policy has led to a general approach and body of knowledge that has been described as Prevention Science. This field represents a range of methods
drawn from a number of fields including evidence-based medicine, epidemiology, human development and related disciplines [4-7].

Stormont [6] summarises the interests of the field as follows:

Rather than simply advocating for prevention based on its own merit or intuitive appeal, prevention scientists have developed rigorous methods to help ensure that effective strategies are developed and evaluated. Among its hallmarks, prevention science emphasizes the importance of understanding the origins of emotional and behavior problems, especially modifiable risk and promotive factors; systematic intervention development targeting these factors; rigorous evaluation of intervention effects; and careful attention to implementation, dissemination, and sustainability throughout the intervention development and evaluation process. Prevention science carefully defines and embraces the value of evidence. Moreover, prevention scientists recognize the importance of ongoing local evaluation to ensure that effects observed in clinical trials persist in real world applications. (p. 1)

The Prevention Science approach involves a sequence of steps; these steps are designed to ensure systematic and rigorous development, implementation and evaluation of policies, programmes and interventions. The key elements of the approach involve 5 basic stages:

- Stage 1 involves clear identification of the problem, disorder or issue to be addressed. This stage also requires thorough review of what is known about the extent of the problems.
- Stage 2 involves reviewing the literature on the factors and causes associated with issue(s) of interest using the available scientific literature. The most comprehensive review might include a meta-analysis that combines findings across a large number of studies.
- Stage 3 involves conducting pilot studies of proposed interventions aimed at addressing the issues of interest.
- Stage 4 involves large-scale, randomised controlled trials to assess the extent to which the proposed intervention is effective in addressing the issues of interest.
- Stage 5 involves taking the proposed intervention to scale and implementing it in the community and conducting ongoing evaluation.

These stages are conceptualised as having a feedback loop in which the outcomes from Stage 5 are used to inform further developments, thus repeating the cycle of policy development and intervention [1, 8, 9].

In terms of the basic Prevention Science model, the present report addresses the first two stages by: (a) identifying a number of key issues; (b) reviewing the evidence on risk and protective factors; and (c) identifying promising evidence-based policies, programmes and interventions.

The key tasks that remain to be addressed involve:

- Identifying policies, programmes and interventions that are likely to be effective in a New Zealand context. This will involve weighing the available evidence, the programme content and demands against a series of factors relating to the availability of resources and funding, issues of cultural acceptability, the feasibility of implementing the programme in New Zealand contexts, and the ‘fit’ of the programme with existing policy frameworks.
- Developing integrated implementation and evaluation plans to: i) pilot and develop programmes; ii) evaluate programme efficacy using randomised controlled trials
or other appropriate methods; iii) develop strategies for taking the programme to scale if it is found to be effective.

The last stage, taking effective programmes to scale is arguably the most difficult of the stages, especially if the programme is to be based in complex open systems like schools or hospitals [10, 11]. Achieving effective scale requires overcoming at least three challenges:

- Although programme integrity is extremely important, some adaptation by those actually delivering programmes is inevitable, especially when programmes require judgements based on detailed knowledge of the local situation or context. In order to protect the fidelity of the programme despite some adaptation, it is important to understand the aspects of the programme that are vital to its effectiveness.

- Embedding programmes so that they are sustainable in the face of ongoing challenges (e.g., demographic and economic changes) is also important. Embedding a programme in a context requires building on site capability that will provide the opportunity to monitor and evaluate the effectiveness of the programme over time. In part this also means being able to monitor how the programme can fit with other activities being carried out at the same location. In the case of schools, for example, it is important to cut additional programmes that do not add value.

- Staged roll out so that implementation resources are not undermined and ongoing research and development can occur into the factors associated with success in the first two components is also important [1, 8, 9].

While the Prevention Science model provides an outline of the steps involved in the development and evaluation of policies, programme and interventions there has been increasing recognition that the success of any policy, programme or intervention will depend critically on how well the programme is implemented as well as the intrinsic efficacy of the programme per se. This aspect of programme implementation is often described as programme fidelity [4, 12-14]. Factors likely to increase programme fidelity (and hence programme success) include:

- Effective delivery of the programme in terms of: adherence to the programme principles; participation of the client population; responsiveness of clients to the programme and related factors.

- Organisation factors including: clear leadership; clear lines of authority; adequate administrative support for the programme; and related factors.

- Staff related factors including: staff training and competencies; adequate staff training; audit of staff training and competencies and related factors.

- Client related factors including: recognition of client needs; support to assist programme participation; client engagement and related factors.

- Cultural factors including: consultation with key group; determination of the cultural appropriateness of the programme; and related factors.

These considerations suggest that for many complex policies and programmes, the implementation and evaluation of the programme will depend critically on an array of complex human issues relating to the delivery of the programme and the ways in which organisational structures, staff and clients perceive the programme or policy and the cultural context within which the programme is to be delivered [4, 12-14]. For example, new programmes in schools need to consider the roles and responsibilities of teachers and leaders within schools. In New Zealand, schools are self governing and teachers act relatively autonomously. Locally designed educational programmes such as those reported in Chapter 7 have intensive components designed to capitalise on the capabilities
Figure 22.1: Guide to creating a system-ready evidence-based programme.
Reproduced from Early Intervention: The Next Steps (2011), an independent report to Her Majesty’s Government, with the kind permission of the author, Graham Allen MP.
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of teachers and their leaders to take instructional decisions and be adaptive, and are generally less scripted than comparable US programmes [11].

Figure 22.1 provides a flow diagram that integrates much of the material discussed above into a conceptual model of the process of policy, development, implementation and evaluation using a Prevention Science approach. The diagram describes five stages of development:

- **Good Intentions:** The first stage of the process begins with recognition of the need to develop a policy, programme, or intervention and a resolution of key issues relevant to the outcomes of the application, the target population and related matters.

- **Promising:** This stage represents the translation of the Good Intentions stage to develop the foundations of an effective policy, programme, or intervention by developing an application outline, recruiting and training staff, and conducting preliminary tests of efficacy.

- **Effective:** This stage involves testing the efficacy of the proposed policy, programme or intervention. Ideally this should involve a well conducted and replicated randomised trial.

- **Model:** This stage involves formalising and further developing the proposed application in readiness for widespread implementation.

- **System Ready:** The final stage of the process involves finalising the steps required to implement the policy, programme or intervention on a population wide basis.

While the prevention science approach has been widely recommended as a means of translating evidence into policy, programmes and interventions, this approach has not been uniformly accepted. Some of the issues that have been raised include the cost of the approach, the time-frame required for effective evaluation, and a potential emphasis on problems rather than on strengths [15]. In addition, there may be some issues for which the evidence base has not yet been established and additional research and careful piloting will be required. In light of these considerations, a number of other paradigms have been proposed. An important one of these paradigms in the New Zealand context is the Te Ao Māori perspective outlined in the next section.

### 3. A Te Ao Māori Perspective

A feature that permeates the statistics on adolescence in New Zealand are the poorer outcomes experienced by young Māori. These statistics include: youth suicide [16, 17], mental health problems [18, 19], crime and youth justice [20, 21] drug and alcohol misuse [22, 23], teen pregnancy [24] and other related outcomes (see also Chapters 7 and 13 on Māori). Reducing the disparities between Māori and non Māori in New Zealand is therefore a matter of the highest social priority, not only for addressing adolescent problems but also for producing a fair, equitable, and culturally-responsive society [25]. Further, the desire of Māori to flourish as Māori in Aotearoa/New Zealand gives an imperative for development based on a Te Ao Māori perspective which is not contingent on a problem focus.

Any discussion of these issues needs to consider the linkages between evidence and applications that are consistent with the Treaty of Waitangi. The Treaty has particular relevance to the government for the development of social, health and related policies and raises complex issues about the development, design and implementation of effective programmes for Māori.
Table 22.1. Comparison of culturally appropriate and culturally responsive policies, programmes and applications (following [28]).

<table>
<thead>
<tr>
<th>Cultural appropriateness</th>
<th>Cultural responsiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refers to programme selection and content, i.e.: do programme values, format and content align with the cultural values and practice of the target group? It includes:</td>
<td>Refers to the delivery of the programme and the ability to respond to fluid, authentic situations in ways that resonate with (and are therefore culturally appropriate) and affirm the culture of clients. It includes:</td>
</tr>
<tr>
<td>Consultation with key groups in selection process</td>
<td>Māori representation at a governance level</td>
</tr>
<tr>
<td>Inspection of programme content to determine accuracy</td>
<td>Major consultation on the content of programme</td>
</tr>
<tr>
<td>Client satisfaction surveys</td>
<td>Implementation of culture specific topics</td>
</tr>
<tr>
<td>Statistical comparison of rates of participation</td>
<td>Ecological approaches such as Te Whare Tapa Whā [29]</td>
</tr>
<tr>
<td>Māori participation in planning of programmes</td>
<td>A focus on whānau ora [30]</td>
</tr>
<tr>
<td>Being able to demonstrate whānau inclusive principles such as whanaungatanga and manaakitanga</td>
<td>Integral Māori processes and protocols such as pōwhiri and whakawhititōrēro</td>
</tr>
<tr>
<td>A holistic approach to treatment plans that addresses cultural, clinical and whānau needs</td>
<td>A whānau liaison worker, advocate, therapist are intrinsic to the programme</td>
</tr>
<tr>
<td>An environment that can assist in enhancing identity and connections such as classrooms, schools or government departments</td>
<td>An environment that can assist in enhancing identity and connections such as marae or tūrangawaewae, as well as schools etc.</td>
</tr>
<tr>
<td>A facilitator with the right credentials</td>
<td>A facilitator with the right credentials</td>
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</table>

Recognition of this issue is well represented in the recent distinctions that have been drawn between culturally appropriate and culturally responsive programmes [26]. In general cultural appropriateness refers to the extent to which programmes are developed and delivered in a way that is considered appropriate by Māori. On the other hand culturally responsive programmes are those which more fully recognise the rights of Māori in the development, implementation and evaluation of the programme [26, 27]. Table 22.1 prepared by Macfarlane [28] compares and contrasts issues relating to culturally appropriate and culturally responsive programmes.

An important implication of Table 22.1 is that while it is possible to incorporate issues relating to cultural appropriateness into programmes developed and evaluated within a Western Science framework, the development of culturally-responsive programmes fundamentally requires the adoption of Māori concepts, values and world view into the process of programme development implementation, and evaluation. These considerations have led to increasing advocacy by Māori for what has become to be known as Kaupapa Māori programmes [26, 30-38]. The Kaupapa Māori approach to programme development has been described by Macfarlane as follows:

The key components that define programmes as ‘kaupapa Māori’ programmes emanate from Māori worldview philosophies and perspectives, i.e.: kaupapa Māori values, beliefs, and concepts, as well as Māori-preferred processes and practices. These components serve to ‘unite’ them all as uniquely ‘Māori’, and ensure that there will be ‘cultural fit’ for those to whom they are delivered [26, 32-38]. These programmes are more likely to resonate with whānau as they draw upon the uniqueness of Māori culture, its ethos, and delivery mechanisms. The contention is that programmes must cover four fundamental areas if the service is to be sufficiently grounded so as to take on the form of kaupapa Māori.
Tapu. This cultural marker is concerned with the sanctity of the person; the special attributes that people are born with and that contribute to defining one’s place in time, locality and society. Often the abuse of the sanctity of the tamaiti might be caused by the erosion of Māori values, and tapu is often the corrective and coherent force that can reinstate wholeness and balance. Kaupapa Māori programmes value the sanctity of the Tamaiti.

Tikanga. This cultural marker is concerned with ‘the Māori way of doing things’. According to Mead [39] tikanga are tools of thought and understanding that are constituted to help organise behaviour and provide some predictability in how certain activities are carried out. Tikanga would include what Linda Smith identifies and explains as Māori ethics within practice [31].

Taonga tuku iho. This cultural marker is concerned with the knowledge base of mātauranga Māori – ideas, interpretations, and modifications made through generations and applicable in today’s education conundrum. Space for Māori knowledge in curricula and programmes is at the centre, not at the margins.

Tino rangatiratanga. This cultural marker is concerned with self-determination and is counter-hegemonic in the sense that curricular and programmes are expressed by Māori. Tino rangatiratanga is a dynamic construct in that it is about removing inhibitions and recognising the dignity of all who are involved in the exploration of good outcomes.

These four fundamental areas should not be considered in isolation—they coexist; they also vary together, but in patterned ways [40]. To take this perspective is to be in tune with a social constructionist approach in programme development. Such an approach will assert that these cultural markers draw from many sources and experiences that are often contrary to ‘essentialist’ formations that have been conventional traditions of thought for so long. In Māoridom, these cultural markers are not just natural or stable givens, but they have become emblematic through the ‘way of doing things’ by Māori in particular circumstances and places, over time. These fundamentals are beneficial—and therefore advantageous—for determining the distinctiveness of culturally responsive programmes.

While there has been increasing advocacy and literature on Kaupapa Māori, the use of this perspective for the development, implementation and evaluation of programmes for Māori has been a contested area. On one hand, critics have pointed to the potential limitations of Kaupapa Māori and its potential lack of rigour from the standpoint of Western Science alone [28]. On the other hand, proponents of Kaupapa Māori have argued for the need to develop culturally responsive programmes and evaluation with a Te Ao Māori framework [26, 27]. Further, it has been suggested that criticism of Kaupapa Māori and other critical methodologies fails to recognise their value in privileging the individual and in providing a source of additional evidence on which to base decisions. These debates mirror broader debates about issues of rights, obligations and ownership that permeate political and social debates about issues relating to the position of Māori within New Zealand [41].

It is the consensus position of this report that Western Science and Kaupapa Māori perspectives should not be seen in tension, rather an approach which encourages partnership and cooperation between these perspectives should be taken. Various approaches to this task have been developed [42-45]. Kaupapa Māori research privileges the views of the participants whereas science privileges the method. In the end, however, both are needed.
One approach to reconciling Western Science and Kaupapa Māori perspectives is the He Awa Whiria (Braided Rivers model) proposed by Macfarlane [44]. This model is depicted in Figure 22.2.

The key features of this model are:

- The Western Science and Kaupapa Māori streams are acknowledged as distinctive approaches to the development and evaluation of programmes.
- The model permits knowledge from the Kaupapa Māori stream to inform the development of Western Science programmes and knowledge from Western Science programmes to inform the development of Kaupapa Māori programmes.
- The model also permits the evaluation methodologies used in the Western Science stream to be applied by the Kaupapa Māori stream and the evaluation methodologies used by Kaupapa Māori research can be applied to the Western stream.

Figure 22.2. Parallel streams model of western science and Kaupapa Māori programme development and evaluation.
Finally the model assumes that the acceptance of programmes as being effective will rely on a consensus based on knowledge from both streams. This model represents a promising solution to encouraging an appropriate partnership between Western Science and Kaupapa Māori. In addition, the model underscores the need to evaluate the impact of programmes on outcomes for different participants. This means, on the one hand, scientific evidence needs to be disaggregated so that the effects of programmes with different groups in different contexts are clearly known. On the other hand, it also requires use of good qualitative data which enables the 'voices' of participants and their responses to programmes to be considered in the evaluation. In New Zealand, an effective policy, programme, or intervention is one that leads to a positive change for individuals and collectives, who must also feel that their cultural (and other) needs have been valued.

4. Encouraging systematic approaches to policy development, implementation and evaluation

Throughout the world, changes are occurring in the development of social and health policies. These changes have been fuelled by the increasing body of research knowledge about the programmes and policies that are likely to be effective and those which are not. The impetus for this approach has also been fuelled by a growing awareness of the fact that many policies and programmes and interventions that have been represented as being effective have proved to be ineffective or even harmful. For example, consider the evaluation of the US-based “Scared Straight” programme [46, 47]. In this programme, young men with a history of delinquent behaviours were taken to prisons and exposed to the realities of prison life supported by graphic description of these realities provided by inmates. Initial qualitative and other evaluations suggested that the programme was beneficial. However when the approach was subject to rigorous testing using randomised trials it was discovered that “Scared Straight” was in fact harmful with those young men exposed to the programme being more likely to offend than those in a control series not exposed to the programme [46, 47].

Findings like this post a clear warning about the social and financial costs of investing in policies, programmes and interventions lacking evidence of efficacy. These considerations raise some important issues about the staffing and infrastructural changes that are needed to accelerate the development of effective evidence-based approaches to policy development, implementation and evaluation. These issues include:

- The need to build greater collaboration between the scientific community and policy makers including politicians, and key Government policy makers so that the key principles of evidence-based programme selection, implementation and evaluation have greater prominence in development of key areas of adolescent policy.
- The need to invest in greater training of research and policy staff in the principles of the evaluation of evidence-based programmes.
- Greater training of research workers who are capable of working within both Western Science and Kaupapa Māori frameworks.
- Greater recognition in public policy documents and legislation of the need to evaluate new policies, programmes and interventions thoroughly before long term investments are contemplated.
- The willingness to discontinue programmes that are not shown to be effective.
5. References

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