WHAKARATONGA IWI

FIRE EMERGENCY NEW ZEALAND

EVIDENCE REVIEW OF EFFECTIVE REDUCTION INTERVENTIONS FOR MĀORI WHĀNAU AND COMMUNITIES

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Te Ratonga Ahi me ngā Ohotata i Aotearoa (Fire and Emergency New Zealand) has a commitment to reducing fire incidence for Māori through effective risk-reduction interventions.

This evidence review explores the key features of effective risk-reduction interventions for Māori whānau and communities in order to inform risk-reduction messaging and activities of FENZ, and to ultimately contribute to the long term outcome of reducing unwanted fires.

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Evidence review of effective risk reduction interventions for Māori whānau and communities

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Whakataki: Introduction

With the recognition of Māori as tangata whenua of Aotearoa, and the acknowledgement that Māori whānau and communities are disproportionately affected by structural fires, Te Ratonga Ahi me ngā Ohotata i Aotearoa (Fire and Emergency New Zealand/FENZ) has a commitment to reducing fire incidence for Māori through effective risk-reduction interventions.

The importance of providing evidence-based, efficient and effective services requires that behavioural change interventions for Māori whānau and communities are supported by robust and timely research (FENZ 2017). Behavioural change is complex and influenced by multiple personal and contextual factors outside of the control of FENZ, however it is an important consideration in terms of risk reduction in communities, and there is evidence that effective behaviour change can lead to sustained change over time (Bidwell 2014).

This evidence review explores the key features of effective risk-reduction interventions for Māori whānau and communities in order to inform risk-reduction messaging and activities of FENZ, and to ultimately contribute to the long term outcome of reducing unwanted fires (FENZ 2017).

Tikanga whakahaere: Methodological approach and methods

This review takes a Kaupapa Māori approach, where the specific contexts for Māori whānau and communities are explicitly recognised. Tino rangatiratanga underpins this research, acknowledging the right to autonomy and self-determination for Māori whānau and communities. Māori are recognised as the experts in their own whānau and community and Māori knowledges and approaches are prioritised. A strengths-based approach to finding solutions is taken, avoiding deficit-focus, and Māori realities are situated in their historical, political and colonial context.

To inform this evidence review, a literature search was undertaken with a key focus on the features of success of behaviour change interventions and approaches for Māori individuals, whānau and communities. The areas of literature included; fire and emergency, accidents, safety (fire, road, water), health (health promotion, long-term conditions, smoking cessation, obesity, gambling, safe sleep), environment (waste reduction), corrections, education (classroom management), and social marketing. The focus was largely on New Zealand literature, with a scan of international literature for other indigenous populations. A thematic analysis has been undertaken to develop this report.

Ngā hua: Results

Five key values and philosophies to guide the development of behaviour change interventions have been identified in this review. They are; **whanaungatanga** (relationships), **manaakitanga** (care and support), **reo and tikanga** (Māori language and culture) **pae ora** (vision of wellbeing), and **tino rangatiratanga** (self-determination and autonomy). An outline of behaviour change models and theories is provided, along with an overview of some key behaviour change interventions that have been designed for Māori. A discussion on the limitations and knowledge gaps of available evidence is also provided.

1. Ngā Mātāpono: values and philosophies

Whanaungatanga – strong, effective relationships

Whanaungatanga refers to the initiation and development of strong, respectful relationships. Under the Treaty of Waitangi, FENZ has an obligation as a Crown agency to develop partnerships with Māori, at both a national level and a local level (Hoskins et al 2001), and the FENZ statement of intent acknowledges the need to develop strategies for strengthening relationships with iwi (FENZ 2017). Good community relationships are critical for influential messaging and engagement (Hoskins et al 2001)

Some key success factors when engaging with Māori communities to implement behaviour change intiatives include:

- Ensuring the principle of tino rangatiratanga is upheld and underpins all activities (Hoskins et al 2001)
- Spending time to develop good relationships (Tipene-Leach 2011)
- Use of appropriate venues which are accessible, comfortable and culturally appropriate (Hoskins et al 2001, MOH 2012)
- Promotion through Māori TV, local iwi radio and newspapers, and local networks (Hoskins et al 2001)
- Māori facilitators delivering messages to Māori communities (Hoskins et al 2001)
- Use of community resources, community champions, role models and whānau networks (Hoskins et al 2001, MOH 2012)
- Validating community concerns during consultation (Tipene-Leach 2011)
- Prioritising cultural and ethical issues (Tipene-Leach 2011)

Developing and maintaining relationships between agencies involved in health and safety message promotion is important. Many programmes and campaigns have identified the need for collaboration across services.

Manaakitanga – care and support

Manaakitanga refers to care and support of individuals and communities, and in this context relates largely to respectful communication, consultation and message promotion to Māori whānau and communities.

Effective information delivered to Māori whānau and communities in an appropriate manner is important. Some preferred features of promotional and informative material include;

- use of Māori imagery
- use of reo, karakia and whakataukī (Bidwell 2014)

- brief, using fewer words and shorter length
- relevant scenarios (in vignettes)
- colour and use of cartoons
- photographs of children and families (Thomas, Rayner and Moroney 2000).

Information and promotion at key Māori events has been effective for other programmes aimed at Māori communities (such as health programmes, waste minimisation). Events can include; Te Matatini, Pa Wars, Iron Māori, Matariki and Waitangi Day celebrations, and local iwi events.

Short, informative videos can be effective such as those developed by Water Safety NZ to promote safe diving practices[1] and waka ama safety[2]. The use of technology (online, text, email, social media) has been effective in some health behaviour change interventions, such as the use of text messaging in smoking cessation programmes (Bramley et al 2005), and may have a place in FENZ behaviour change interventions.

Where possible, a kanohi ki te kanohi approach (face to face) is preferred when engaging with Māori, provision of information alone is inadequate (Bidwell 2014). Ensuring the workforce capacity to deliver to Māori communities is essential, requiring dedicated FTEs, adequate resourcing, specific staff training including ongoing cultural competency training, and regular opportunities for staff to share information and learnings. Ongoing support and encouragement for Māori communities is important.

Te reo Māori me ōna tikanga – Māori language and culture.

Cultural awareness, sensitivity and safety, and an understanding of tikanga Māori is critical for effective engagement with Māori whānau and communities (Hoskins 2001). Facilitators competent in both reo and tikanga are important for engaging with Māori, particularly on the marae, and during formal rituals of encounter in other spaces. Promotional materials should be provided in both te reo and English. The guide on bilingual signage developed by Te Puni Kokiri could be useful in the development of promotional materials[3] (Te Puni Kokiri 2016). Many organisations are providing informative resources in te reo, such as the Safekids resource: Te Ara Hauora (road safety)[4], checklists for making a home safe[5], and poisoning[6], also cervical screening[7] and bowel screening[8] among others.

Initiatives grounded in relevant cultural concepts are most effective and alignment of behaviour change programmes with fundamental Māori principles has been seen in other programmes such as Waste Minimisation plans incorporating the principle of Kaitiakitanga (see examples: Far North District Council 2017, Rotorua Lakes Council 2016), a school behavioural intervention underpinned by principles of whanaungatanga, kotahitanga, rangatiratanga and manaakitanga (Savage et al 2012), implementation of cultural values in tikanga based rehabilitation programmes in prisons (Mitchell 2018), and the promotion of the 'hui process' to guide health practitioner engagement with Māori patients and whānau (Lacey et al 2011) . There is some evidence of existing programmes

[1] https://watersafety.org.nz/Community-Resources/Fit%2C-Check-and-Signal-with-NZ-Underwater-Association
[2] https://watersafety.org.nz/Community-Resources/Safety-is-Number-One-with-Waka-Ama
[3] https://www.tpk.govt.nz/en/whakamahia/te-reo-maori/tohureorua
[4] http://www.safekids.nz/Information-research/Information-Search-Results/Type/View/ID/13008
[5] http://www.safekids.nz/Resources/ProdID/147
[6] http://www.safekids.nz/Resources/ProdID/51
[7] https://www.healthed.govt.nz/resource/cervical-smear-tests-what-women-need-know-%E2%80%93-maori-version , https://www.healthed.govt.nz/resource/if-you-could-save-life-m%C4%81ori-%E2%80%93-te-reo-m%C4%81ori-version
[8] https://www.healthed.govt.nz/resource/national-bowel-screening-programme-%E2%80%93-te-reo-m%C4%81ori-version

being successfully adapted for Māori such as a mental health intervention which was modified to include an emphasis on relationships, spirituality, reo and imagery (Mathieson et al 2012).

Use of tikanga activities, art and imagery has been effective and favourably received by Māori in some behaviour change interventions such as promotion of the use of a traditional wahakura (woven baby bassinet) to encourage safe sleeping practices (Abel and Tipene-Leach 2013), also the use of raranga (weaving) as part of the 'Ngā Pou Wāhine' behaviour change intervention for gambling, which also centred the design of its intervention around Māori artworks depicting atua wāhine (Morrison and Wilson (2017).

Explicitly acknowledging and incorporating the newly-released values of FENZ would likely be effective in engaging with communities[9]. These are;

- Kia tika – we do the right thing
- Manaakitanga – we serve and support
- Whanaungatanga – we are better together
- Auahatanga – we strive to improve

Pae ora – vision of wellbeing

Pae ora literally translates as 'horizon of wellbeing', and has a distinct aspirational element incorporating tūmanako (hope) and whāinga (aims).

Many behaviour change programmes are centred on the aspiration of wellbeing, such as a behavioural intervention model for Māori students features oranga (McFarlane 2010), and a study on Māori perspectives of water safety, which positions discourses in the journey to hauora (Phillips 2019).

Many marae, hapū, iwi and other Māori community groups have strategic plans for health and wellbeing. District Health Boards have Māori Health Plans that align with *He Korowai Oranga*, the national Māori Health Strategy, which has Pae Ora as its overall aim, underpinned by waiora (healthy environments), whānau ora (healthy families) and mauri ora (healthy individuals)[10] (Ministry of Health 2014). Aligning FENZ behavioural intervention activities with existing local Māori health strategies will likely increase uptake, support, participation and acceptance of these activities and therefore maximise effectiveness of risk reduction programmes.

In a similar way, the Māui-tini-ahei fire safety education programme is aligned with education curricula (New Zealand Fire Service 2010).

Tino Rangatiratanga – self-determination and autonomy

To fully allow for autonomy, behaviour change activities should be led by the community, with scope for full engagement and participation of individuals and whānau Māori.

Effective community-led initiatives include the principle of self-determination; the ability to have a voice, to participate, and to exercise control over one's destiny. A focus on the strengths and assets of communities, a holistic and ecological approach and a focus on process and relationships as well as tangible outcomes are all seen as factors for successful engagement (Ball and Thornley 2015).

Māori leadership and involvement in the decision-making processes, and the design and facilitation of interventions and activities, is important for success. Governance groups comprised of

[9] https://fireandemergency.nz/news-and-media/?category=1
[10] https://www.health.govt.nz/our-work/populations/maori-health/he-korowai-oranga

community leaders and key stakeholders are often established to guide community programmes and interventions (see for example: Water Safety NZ BOP[11]).

Joint venture Fire Awareness campaigns and environmental interventions are recommended involving FENZ, other Government agencies and existing Māori Social Service providers (Hoskins et al 2001). Co-design models have effectively been used in other programmes such as health behaviour change interventions (Verbiest 2018, Te Morenga et al 2018).

The importance of considering the full context of Māori whānau and communities is emphasised, and processes for reflecting on the impacts of colonisation has been deemed important (Ball and Thornley 2015). Non-Māori are more advantaged than Māori across a number of socio-economic indicators[12]. This can impact behaviour change activities as those in lower socioeconomic position have fewer social ties, lower perceived control, high stress, risk-taking behaviours, are more likely to be in insecure employment in higher risk jobs, lower literacy and more likely to be affected by affective states such as depression (Glover 2010). These factors combine to not only increase risk of fire for Māori, but also present challenges for effective messaging and behaviour change interventions. As behavioural factors within Māori communities are largely socio-economically based, a dual focus on both behavioural and environmental factors is required (Hoskins 2001).

2. Behaviour change theories and models

There are numerous behavioural change theories and models, and the field of behavioural science is vast. Models are selected here based on their perceived relevance to safety interventions at community level, and potential or actual alignment with Māori philosophies, values and social context.

Understanding the underlying influences behind decision-making and behaviour will help determine appropriate intervention design for Māori whānau and communities. Changing the behaviour of a population can take time, particularly when situated in a socio-cultural context that promotes social norms other than those desired for safe practices. The WHO suggests that effective awareness and behaviour change campaigns need to be **sustained over many years and to reinforce messages** many times to the community, and to specific populations within the community (WHO 1997).

Consideration of the 'readiness' for change in a community could be useful. One **stage of change model[13]** considers the following continuum:

1. Pre-contemplation (not intending to make changes) [mauri noho]
2. Contemplation (considering a change) [mauri oho]
3. Preparation (making small changes) [mauri rite]
4. Action (actively engaging in the new behaviour) [mauri tū]
5. Maintenance (sustaining the change over time) [mauri ora]

While this is designed for individuals, it may also have relevance to cohesive community groups such as marae, iwi groups or Māori organisations. It has been utilised in the exploration of health behaviours of Māori men (Paddison et al 2012) and has been applied in healthy eating interventions

[11] https://watersafety.org.nz/A%20new%20approach%20to%20reduce%20drownings%20in%20Bay%20of%20Plenty

[12] https://www.health.govt.nz/our-work/populations/maori-health/tatau-kahukura-maori-health-statistics/nga-awe-o-te-hauora-socioeconomic-determinants-health/socioeconomic-indicators

[13] Also known as the 'Transtheoretical model'

for Māori women (Tassell and Flett 2005). It is also acknowledged that stages are not always clearly distinguishable, and that there can be a further (undesirable) stage of 'rejection' of the intervention. The stages have been described here in terms of mauri, added following discussions with FENZ Māori liaison officers[14].

The **Health Belief Model** posits that behaviour is determined by perceptions of threats to the wellbeing of an individual (or community) and the effectiveness of actions or interventions. Readiness to take action is dependant on perceived benefits (of changing behaviour), balanced against the perceived costs (time, effort, money) and any potential negative consequences. A further consideration is self-efficacy, or the capacity of the individual (or community) to adopt the behaviour.

The following quote relates to health in individuals, but can equally apply to safety issues at a community level:

> *"In order for behaviour to change, people must feel vulnerable to a health threat, view the possible consequences as severe, and see that taking action is likely to either prevent or reduce the risk at an acceptable cost with few barriers. In addition, a person must feel competent (have self-efficacy) to execute and maintain the new behaviour."* (Nisbet and Gick 2008:297).

The **four E's model** considers behaviour change strategies under the following categories (Morris et al 2012):

- **Enable** (remove barriers, provide information, provide facilities, provide viable alternatives, educate, provide capacity)
- **Encourage** (incentives, rewards, social pressure, disincentives)
- **Engage** (community action, co-production, role models and champions, media campaigns and promotion)
- **Exemplify** (lead by example)

Although this model has been critiqued for its focus on individuals, and limited consideration of sociopolitical influences, it has been applied in environmental behavioural change initiatives aimed at community level.

A **Native Theory approach** in community development promotes a focus on the community's strengths and cultural processes, and advocates that projects are tailored to the specific community (Eketone 2006).

Te Whare Tapa Whā is well-known as a health model with the four dimensions of wellbeing; hinengaro (mental and emotional), whānau (social), tinana (physical) and wairua (spiritual). It has also been implemented as a behaviour change model in smoking cessation programmes, with the addition of Te Ao Turoa (the environment) which provides for environmental and political factors (Glover 2005).

Self-determination theory provides a conceptual framework for understanding an individual's motivation to change behaviour. Intrinsic motivation is deemed to be most effective, and is that driven by rewards which are internal to the person, inducing feelings of competence, engagement and self determination and therefore fulfilling basic human psychological needs (Glover et al 2010).

It's likely there is no one singular theory or model that will be fully applicable to the behaviour change activities of FENZ, however a multi-theory approach may be taken. Other potential areas to

[14] FENZ hui, Māori liaison officers, Rotorua, 17 May 2019.

explore include; cognitive behavioural therapy, community based social marketing, problem solving, motivational interviewing, and the behavioural change wheel.

3. Behaviour change: barriers, enablers and challenges

Barriers to behaviour change have been identified as follows:

- High cost to taking action
- Inconvenience and lack of time
- Lack of trust that actions will improve the situation
- Apathy and low motivation to act (Kennedy 2002)
- Whakamā – sense of embarrassment or shame.
- Stigma
- Authoritative, instructional language

Enablers or motivating factors to behaviour change for Māori have been identified as:

- Health benefits (e.g. in smoking cessation programmes)
- Cost-saving practice
- Benefits for whānau, especially a focus on mokopuna
- Having champions or role models to promote change. Role models need not be someone who is famous or well-known, but someone who a community can readily relate to, and reflective of the community
- Use of humour and stories in promotional material
- Using opportunistic moments to promote safety messages to a community, such as directly following an incident.

Challenges to implementing programmes:

- A need to address the wider determinants of health and wellbeing
- The population may be hard to reach and engage
- Working across agencies
- Turnover of staff in social agencies
- Funding
- Resource development
- Any legal requirements

4. Behaviour change programmes with a particular focus on Māori individuals, whānau or communities

He Oranga Poutama is a Sport NZ initiative that supports Māori wellbeing through sport and recreation, recognising the importance of culturally distinctive pathways for Māori. The programme was delivered through 12 providers over 4 years. Te Whetu Rēhua is an evaluative framework underpinned by Māori values and principles that forms the foundation of He Oranga Poutama. Central to the programme was both the development of **strong relationships between providers**, and **strong cultural leadership.** It was noted that both individual and organisational cultural capability is vital for the facilitation of the programme. In addition to **reo and tikanga** expertise, this requires an **understanding of kaupapa Māori principles**, a **cultural advisory function**, and a respectful **relationship with local kaumātua** (McKegg et al 2013).

Te Kahui Whai Ora, Healthy Lifestyles and Tamariki Programme was a Māori obesity initiative which used **children as agents of change** in health promotion activity. An evaluation of the programme concluded that while children can be powerful agents of change, there is a need to be mindful of protecting children and encourage health behaviour change in a way that **empowers whānau** (Boulton A, et al 2011).

It's about whānau is a smoking cessation campaign aimed at Māori which places **whānau and whakapapa** at the centre. It used **Māori concepts of health and wellbeing**, aspects of **culture and identity** and **positive Māori images** to promote smokefree living. The programme was positively received by Māori (Moewaka Barnes and McPherson 2003, Grigg et al 2008).

Mana Tū is a **mana-enhancing** programme that supports Māori with type 2 diabetes to take charge of their condition (Harwood et al 2018). The programme was developed by an **expert advisory group** and **aligns with two key strategies** in the Ministry of Health: *Equity of Health Care for Māori: a Framework*[15], and He Korowai Oranga, which has **rangatiratanga** at its core (MOH 2014). Mana Tū **works across the three levels: system, service and individual/whānau** in an integrated framework for change. The programme involves integration and **collaboration of a diverse range of providers** (health, housing, education, social), and is delivered by kai manaaki, case managers that provide support for individuals and whānau, who are trained in **motivational interviewing, cultural safety and health literacy. Kai manaaki live and contribute in the local communities** with whom they are working. Mana Tū uses a **sophisticated information platform** (called Mohio) to allow innovative data capture (Harwood et al 2018).

Aukati Kai Paipa was a unique smoking cessation programme primarily targetting Māori women. A significantly higher quit rate was observed in participants. The programme operated in **a Māori setting, and was delivered by Māori to Māori.** Other success factors included the **ability to adapt the programme** to suit local community needs, **strong ties of the quit coaches with Māori communities**, **Māori having ownership of the programme**, recognition of **traditional and cultural characteristics** and delivery of the programme in **a manner that was acceptable and relevant to Māori**, including long term support (Ministry of Health 2000)

The Noho Marae smoking cessation intervention required participants to attend five to seven day residential **hui on a marae** where they stop smoking on the first day, and are supported to continue. The programme was found to be effective (35% quit rate at 4 months) and had a **focus on whānau** rather than individual (Glover 2000).

My home is my marae is a falls prevention initiative designed to **empower Māori communities** through **sharing knowledge and skills** about home safety to enable identification of hazards in homes. An evaluation of the programme defined five key strengths of this initiative; **mana tangata** (reputation, respect and credibility), **manaakitanga** (generosity and care for people), **kanohi ki te kanohi** (face to face discussion), **capacity building**, and **low or no cost** solutions to hazards in the home (Villa R 2015). The programme takes **a by Māori, for Māori** approach, kaimahi are local to the community and have **connections to whānau often through whakapapa**, and can deliver messages that are **mana-enhancing.**

The Ngāti Porou community injury prevention project involved road safety campaigns, alcohol and drug programmes, family violence initiatives and playground safety. Based on sound principles and with a **focus on Māori aspirations**, statistics for the period following the intervention showed a decrease in injury rates. The project applied the principles of **role modelling, taking a life span**

[15] https://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2018/vol-131-no-1485-9-november-2018/7742

focus, accessibility, acceptabilty and active participation, and an evaluation of the project concluded that the model could be repeated in other communities (Brewin and Coggan 2007).

The WERO group stop smoking competition incorporates cultural practices such as a **holistic family focus**, and involved recruiting and forming 14 teams who competed to win $5,000 for a charity of their choice (Glover 2013). WERO combined several strategies including: **peer support, cessation provider support, incentives, competition and interactive internet and mobile tools.** High follow-up quit rates were observed 6 months after the competition indicating the intervention was effective (Glover et al 2014).

Kia Maanu, Kia Ora! (stay afloat, stay alive) was a campaign to reduce the incidence of Māori drowning (Haimona 2007). The programme was informed by **an initial exploration into Māori practices and activities around water** (Karapu et al 2008). The programme comprises education and events, led by Water Safety NZ in partnership with Tangaroa Ara Rau (the **Māori advisory group**), and facilitated through community providers. The programme has a strong emphasis on **training educators with reo capacity** to deliver the programme to kura and Māori communities, running **leadership and water safety wānanga** with rangatahi and **water safety workshops** at waka ama nationals. A **well-known Māori identity**, Rob Hewitt is an advocate and facilitator of the Kia Maanu, Kia Ora campaign.

Ngā Pou Wāhine provides a sociocultural context for Māori women to cease gambling and draws on **te ao Māori (both traditional and contemporary)** to analyse the need to gamble (Morrison and Wilson 2013). The framework is based on **artwork of a well-known Māori artist;** Robyn Kahukiwa's Ngā Pou Wāhine series of eight paintings representing wāhine. **Whakapapa and whanaungatanga** play important roles in **restoring the mana, tapu, mauri and rangatiratanga** of Māori women. Each of the pou contain **stories that serve to displace colonisation, affirm Māori cultural identity, and reconnect Māori women to their Māoritanga**. The intervention was seen to be effective, with evidence of increased self-efficacy and decreases in gambling severity (Morrison 2017).

Para Kore[16] is an initiative that promotes zero waste activity on marae, kōhanga, kura and Māori organisations. It is underpinned by the key philosophies: **whakapapa, manaakitanga, whanaungatanga and kaitiakitanga**. The programme is facilitated through **kaiārahi local to a specific community,** who have **reo and tikanga expertise** and who can **model and promote waste reduction behaviour.** Organisations sign an MOU **to indicate commitment to the programme**, there is **no cost** to the organisation and materials and resources are provided in **te reo Māori** as well as English. An online tracker is provided for organisations to **track their waste reduction tally** over time.

5. Strengths, limitations and knowledge gaps.

This evidence review has provided valuable insight into behavioural change activities for Māori whānau and communities, however significant gaps in available knowledge have been revealed. Many safety and health campaigns in Aotearoa are not specific to Māori, rather aimed at the general population so they haven't been included here. In addition to this, evaluations of such programmes are often not analysed by ethnicity, therefore effectiveness for Māori cannot be assessed. Examples include Push Play (Bauman et al 2003), NZTA drink driving campaigns[17], and the Green Prescription Scheme (Hamlin MJ 2016). Many behavioural change initiatives, models and theories are focused on the individual rather than the collective, such as whānau and community. Those included here have mostly been selected for their perceived relevance to the collective.

[16] http://parakore.maori.nz/para-kore/what-is-para-kore/

[17] https://www.nzta.govt.nz/safety/driving-safely/alcohol-and-drugs/drink-driving-advertising/lads/

A number of behavioural change programmes are aimed at health behaviours where the motivations for change are quite specific and readily identified, such as smoking cessation or obesity. The motivation for change in safety and hazard prevention initiatives is less obvious, however many health behaviour change programmes have been included in this review as they still have considerable relevance as examples of implementing tikanga Māori or values into a behaviour change model. Some health promotion programmes had limited relevance to the fire safety context so have not been included here (such as breast and cervical screening).

For some initiatives, evaluations and theoretical detail behind the campaigns is not readily available, and information has been gleaned from the website and personal knowledge (such as Para Kore), and it's also possible that evaluations of smaller local community initiatives were not undertaken, therefore not available.

The area of behavioural psychology is complex and contains many proposed theories and models for behaviour change. This evidence review revealed a paucity of such models specific to communities, particularly indigenous communities, and that also considered the colonial socio-political context of the specific population such as Māori.

Whakarāpopototanga: Summary

The thematic analysis undertaken as part of this evidence review has revealed five key te ao Māori philosophies to guide risk reduction intervention planning: whanaungatanga, manaakitanga, reo and tikanga, pae ora and tino rangatiratanga. These are features of successful interventions for Māori and also have a decolonising, self-determination focus, therefore taking into account the wider historical, social and political context of Māori whānau and communities.

While most behaviour change theories and models explored as part of this evidence review were not likely to directly apply to Māori communities, there are elements of the various models that will be useful in the design of interventions. Safety messages need consistent reinforcement over time. Carrying out a needs assessment for a community can identify their readiness for change, gather baseline data, and determine specific characteristics and needs of the community itself. Balancing perceptions of benefits and costs of behaviour change can gain buy-in, and help determine the strategies that are most likely to be effective. It's likely that a multi-theory approach is the most appropriate. When designing an intervention, barriers should be minimised and enablers enhanced. A list of possible barriers and enablers has been provided here, there may be others specific to a particular community. Challenges to programme implementation need to be considered in advance and minimised where possible.

In the overview of behaviour change programmes for Māori, key features of each intervention are highlighted in **bold font.** A scan of these features will reveal the importance of relationships, leadership, empowerment and mana enhancement. Māori principles form the foundation of many successful programmes, and use of cultural practices, positive imagery, Māori artforms and Māori role models has been successful.

Effective communication, collaboration across services, and the importance of co-development of intervention with the community is emphasised. A by Maōri, for Māori approach is favoured, with a strong focus on capacity development and training of staff. Other strategies might be considered such as competitions, incentives, rewards and public tracking of progress. Alignment with existing governmental or local strategies (such as those in health or education) can help provide leverage and support. A self-determination focus in an intervention can contribute to decolonisation by advancing the aspirations of Māori whānau and communities.

While limitations of this evidence review are acknowledged, there is considerable information presented here that can contribute positively to the risk reduction activities of Te Ratonga Ahi me ngā Ohotata i Aotearoa.

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