He Koha Aroha

A study in the area of Māori suicide prevention strategies

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Executive summary

Māori suicide rates in New Zealand surpass those of non-Māori. Between 1996 and 2008 there is a downward trend in suicide rates among non-Māori. In contrast, Māori suicide rates have not shown this same trend over the same period, and rates fluctuate year to year (Ministry of Health, 2008). Disparity between Māori and non-Māori is most notable when comparing youth (15-24 years of age) of both populations. Among both Māori and non-Māori, there are consistently higher rates for males compared to females (Ministry of Health, 2008).

The New Zealand Suicide Prevention Strategy (Ministry of Health, 2006-2012) aims to address these statistics. Goals specific to reducing inequalities in suicide rates between Māori and non-Māori highlight the need for incorporation of Māori concepts of hauora (health), and whānau ora (family health and wellbeing) in healthcare services.

Two strategies for suicide prevention are social marketing and community development. Social marketing is outlined by Donovan & Henley as the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programmes designed to influence behaviour. However there is a key difference between social and commercial marketing in that the benefit of social marketing lies with the community and not the marketer (Donovan & Henley, 2003). Community development involves a group of people with a shared identity interacting in order to come up with ideas and solutions to problems (Cavaye, 2006). The community involved in the strategy has control over definitions of aims, administration, local knowledge, skills and resources (Smith et al, 2003).

The aim of this project was to examine trends in Māori suicide rates in recent years and to investigate the use of social marketing and/or community development for Māori suicide prevention. In addition to this, we aimed to provide a set of recommendations to the Mental Health Foundation based on the research findings, in order to frame future Māori suicide prevention strategies.

Our research was conducted with the Maori model of health promotion Te Pae Mahutonga in mind. This model comprises the core aspects of Maori health; Mauriora (cultural identity), Waiora (physical

environment), Toiora (healthy lifestyles) and Te Oranga (participation in society) under the guidance of Ngā Manukura (community leadership) and Te Mana Whakahaere (autonomy).

A thorough literature search using specific search parameters was carried out. Interviews with key informants were carried out face to face, via telephone, or email. Key informants were identified based on recognised leadership and experience in the field of suicide.

A comprehensive thematic analysis of the interviews was performed. This identified advantages and disadvantages for both social marketing and community development. Some of the benefits of social marketing that came out of the interviews were: Raising awareness, destigmatisation, reaching out to a greater population, and using social networking as support forums. The recurring negative issues regarding social marketing were: the economic costs, the risk of contagion, the targeted approach necessary to be effective and the fact that social media may not reach all members of society. There is a lack of evidence to confirm that social marketing alone is enough to prevent people from committing suicide. Many small organisations also lack expertise in using media effectively.

Community development was a desirable intervention for all of our experts. One of the benefits outlined was that its ability to address both the proximal and distal determinants of psychological health, in particular whānau resilience and cultural identity. Other benefits of community development were its ability to be tailored to meet the exact needs of the community and to make use of resources that are intrinsic to the community building on it's internal strengths.

There were some aspects of Community development that were consistently regarded by our experts as disadvantageous. Community development is difficult to pull off effectively because It needs to be implemented over a long period of time and requires a sustainable source of resources and funding. Communities are often 'slow to change'. This is due to a number of different reasons, such as already having suicide prevention programmes established that have been ingrained in the community over a number of generations. There is a need for more research in this area as there is currently limited evidence to suggest that community development is effective.

Advantages of our study included the use of the Māori model of health Te Pae Mahutonga. The use of this model ensured the data obtained was culturally relevant. key informants were chosen because of

their expertise in the field which enabled us to gather insight into current strategies and opinions on our topic from the most credible sources.

Limitations of our study included the lack of literature and solid information available on the pros and cons of social marketing and community development. Also, Qualitative data made the cost benefit analysis difficult and we decided not to go ahead with it, instead choosing a qualitative analysis. Time and resource restraints also made logic modelling difficult and this was also not done. The key informant interview response rate was low at 58%.

Based on the findings of our research, our recommendations to the Mental Health Foundation are as follows:

1. Due to deficits of data identified within the published literature we recommend that further research needs to be undertaken to determine the effectiveness of social marketing and community development as Māori suicide prevention strategies.
2. In addition we recommend investing in the development of robust evaluation tools for measuring the effectiveness of community development intervention programmes.
3. Future suicide prevention initiatives must utilize both social marketing and community development strategies in order to have the most beneficial and successful outcomes in preventing Māori suicide.
4. Suicide prevention strategies must be designed around a Māori health model framework to ensure they are culturally relevant and accessible to Māori people.
5. We recommend when designing suicide prevention strategies at the community level, to utilize and build on strengths present within the community (i.e. prominent community leaders/role models) to make intervention strategies more cost effective and sustainable and also more accessible and applicable to those who it is targeting.

Background

Māori are over-represented in New Zealand's suicide statistics. However, there is little evidence to date about effective interventions to prevent suicide among Māori and other indigenous populations (Lawson-Te Aho, 2012). The two most common approaches that have been used in the past are social marketing and community development. Currently, social marketing is being increasingly used to encourage behaviour change amongst Māori. Two examples of this are the television advertisements for the *'It's not Okay' campaign* for action on family violence and the *'Like Minds Like Mine'* to reduce stigma and discrimination for those experiencing mental illness. Community development has been applied in suicide prevention programmes in New Zealand (Ihimaera et al, 2007; Lawson-Te Aho & Liu, 2010) and in other Indigenous populations but there has been little evaluation of its effectiveness.

There is a need for investigation into the strengths and weaknesses of the use of social marketing and community development in Māori suicide prevention to allow a direct comparison to be carried out. This will inform future decision making on the use of either one or both social marketing and community development approaches in reducing Māori suicide in New Zealand.

Aims

This research project aims to examine trends in Māori suicide rates in recent years and to investigate the use of social marketing and/or community development for Māori suicide prevention. The strengths and weaknesses of each approach will be examined qualitatively. In cases where there is no objective outcome measures which allow for fair comparison of each approach, the researchers will hypothesise links using the evidence available and on the advice of key experts in the field.

Specifically, we aimed to:

1. Define the terms: social marketing and community development with respect to Māori suicide prevention.
2. Identify forms of social marketing and community development currently in practice.
3. Identify and report trends in Māori suicide over the last 13 years (1996 to 2008).

4. Investigate the pros and cons of social marketing and community-based interventions through discussion with experts in the field of mental health with particular emphasis on Māori suicide prevention.

5. Investigate the cost-effectiveness of social marketing and community development in Māori suicide prevention and the economic, social, cultural, and political costs of Māori suicides.

6. Discuss the logistics of community development and social marketing as forms of intervention.

7. Produce a set of recommendations for the Mental Health Foundation based on the findings of the study.

Methods

Research Team Composition and Administration

The research team consisted of a group of fifteen fourth year medical students, studying at the University of Otago, Wellington School of Medicine. Our staff research supervisor was Keri Lawson-Te Aho (Lecturer, University of Otago, Wellington School of Medicine). Also supervising and assisting our research team was Pania Lee (Project Manager, Mental Health Foundation) and Sarah McKenzie (Department of Public Health, University of Otago, Wellington School of Medicine).

After receiving our project question and discussing the logistics of the research, the first decision the group made was assigning Kyle Paton (fourth year medical student) as the project leader. To evenly distribute the workload between the group we then split up into four sub-groups, each consisting of three or four people. Each group was assigned a particular element of the research project to focus on, which are listed as follows: ethics proposal, literature review, key informant interviews, cost-benefit analysis. However, it is important to note that these groups only served to loosely direct members of the research team, and considerable cross-over between research sub-groups did occur.

Te Pae Mahutonga

Whilst conducting our research the "Te Pae Mahutonga" Māori health framework was kept in mind as a means of constructing our research framework in a culturally appropriate manner (Māori Health, 2012).

Literature Review

An extensive literature review was performed by identifying all relevant publications and literature. Methods of the search terms are outlined in the literature review section of the report. We used the literature to answer several key background research questions. Firstly, we were able to formulate concise definitions of both the terms 'social marketing' and 'community development' within the parameters of our research question. Existing examples of both terms were identified within New Zealand and beyond. Although there was no clear quantitative data supporting the implementation of either technique, a host of grey literature provided subjective data on the benefits and disadvantages of

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both methods for health promotion. Finally, we analysed the data to identify trends in Māori suicide since 1996. After answering these key research questions we had sufficient background knowledge to progress with our own research question.

Key Informant Interviews

We aimed to invite up to twenty experts in the field of Māori mental health and/or Māori suicide prevention. We selected and recruited these experts based on recognised leadership, qualifications and experience in these fields. Furthermore, we were guided by a representative from the Mental Health Foundation, the Māori Senior Manager in the Ministry of Health and our project supervisors. A comprehensive list of key informants invited to participate is included in Appendix 2.

We contacted participants directly by email or telephone to invite their participation in the study. All potential participants were provided with an information sheet outlining the research and were given the opportunity to ask questions about the research before the formal interview. Furthermore, the information sheet explained that the interviewee was free to withdraw from the project at any stage without any disadvantage. All interviews were recorded in a digital format (audio recording, written questionnaire) for analytical purposes. Following the completion of the study, any raw data on which the results of the project depend will be retained in secure storage within the medical school for at least five years.

Where possible, interviews were conducted face to face/kanohi ki te kanohi – consistent with a Kaupapa Māori research methodology (Cram, 2005). A Māori member of our project team, Amber-Lea Rerekura, lead the interview process as she had established relationships with some of the research participants (consistent with Kaupapa Māori research) with support from senior Māori researchers. Where face-to-face interviews were not possible, we attempted to conduct Skype or telephone interviews and failing this we sent participants an email questionnaire.

A semi-structured, open-ended interview structure was employed by our interview team. Questions were drawn from from a pool of key questions. This pool of questions included:

- What is your involvement in Māori suicide prevention?

- Do you prefer social marketing or community development?
- What are some of the barriers and/or challenges you face when you do what you do?
- What's your opinion on the suicide contagion theory?
- Are there enough community resources to follow up a social marketing campaign?
- What are some of the main causes of suicide?
- How does Māori suicide prevention differ from non - Māori suicide prevention?
- Is there a problem with the way suicide is viewed in New Zealand?
- Should there be more reporting of suicide in the media?
- How do you assess the effectiveness of your interventions?

Data analysis

A thematic analysis framework was used to identify themes from the key informant interviews. Due to time and resource constraints it was not possible to transcribe interviews into hard copy. Small sub-groups of research team members listened to the recorded interviews and extracted themes and key quotes for analysis. The themes were loosely categorised into: social marketing advantages, social marketing disadvantages, community development advantages, community development disadvantages and other themes.

Cost-benefit analysis

An economic evaluation of social marketing versus community development in the form of cost-benefit analysis was attempted. Relevant information on the costs of the interventions and their corresponding benefits in Māori suicide reduction was sought from the literature. However, due to the various challenges encountered, which will be explained in the results section, we shifted our focus to the costs of Māori suicide in general. These included economic costs, life-years lost, cultural costs, political costs and social costs which were considered with reference to relevant literature, unpublished academic work and governmental publications.

Literature Review

Methods

A variety of sources were used to identify the existing literature on our topic. We used the databases: PubMed, Ovid and PsychINFO, along with Google Scholar to identify many of the key resources. Multi-field key word searches included the following terms:

- "indigenous" OR "Māori" OR "New Zealand" AND
- "suicide prevention", "community development" OR "community action" AND
- "New Zealand Māori" OR "Indigenous" AND
- "social marketing"

Articles and reports that were appropriate and relevant to our topic were included in our literature review.

Websites were used for New Zealand specific suicide documents; these included the Ministry of Health website and the Suicide Prevention Information New Zealand (SPINZ) website. Whilst doing internet searches a substantial amount of grey literature was also found and reviewed.

Due to a scarcity of published literature on social marketing use as a suicide prevention strategy in New Zealand, we proceeded to specifically search for known social marketing campaigns, such as the "It's about whānau" campaign. Researchers also spoke to Māori health researchers who signposted us towards relevant information and literature including publications on Māori health.

Māori Suicide: Descriptive Epidemiology

High Māori suicide rates have been an increasing problem over the last few decades. It is of interest to note that before 1996 Māori rates were significantly lower than those for non-Māori (Joanne Baxter, 2007). However it is the changes in ethnicity reporting that occurred in 1995 which account for the apparent lower suicide rates amongst Māori. Ethnicity was originally recorded based on biological classification, this required a person to have blood ancestry of 50% or more to be recorded as belonging

to the Māori ethic group and only one ethnicity could be recorded for each individual (Nicole M Coupe, 2002). This reporting criteria changed in 1995 to allow for self-identification of ethnicity and also the opportunity for multiple ethnicity's to be recorded for one person. These changes in reporting means that prior to 1996 the Māori suicide rates would have been underestimated and that the disparity was hidden rather than concluding it was absent.

The latest New Zealand Ministry of Health report on suicide brought concerning statistics into light. Between 1996 and 2008 a downward trend was shown in suicide rates among non-Māori; in contrast Māori suicide rates have not shown the same trend over the same period (Ministry of Health, 2010). Instead, suicide rates among Māori have shown volatile significant increase from year to year. Therefore it may be important to examine the trends reported rather than comparing rates between Māori and non-Māori on a particular year. For example, in 2008 the Māori suicide rate was reported to be 13.3 per 100,000 population compared to the non-Māori rate of 10.6 suicides per 100,000 population. These numbers could lead to a conclusion that there is little disparity between the two populations if the overall trend is not examined.
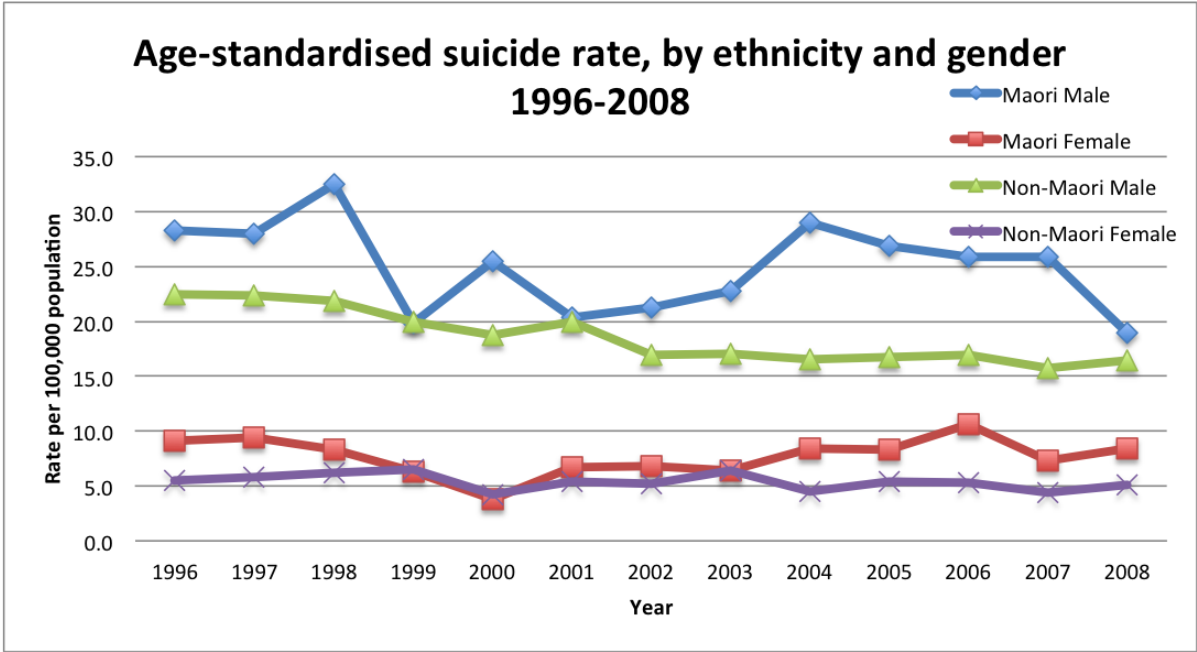
This disparity is significant when comparing Māori and non- Māori, but even more so when comparing the Māori and non- Māori younger populations (figure 2). In 2008 the Ministry of Health recorded the Māori youth suicide rate at 27.6 per 100,000 Māori youth population, which is approximately 70% greater than that of the non-Māori youth (16.4 per 100,000) (Ministry of Health, 2010). Within the Māori population itself higher rates are seen in youth compared to older Māori age groups. In 2005 young Māori aged 15-24 were 5.6 times more likely to die by suicide than older Māori aged over 65 years (Joanne Baxter, 2007). These figures highlight the importance of a suicide prevention plan that must be youth-focused in the Māori population.

Māori male suicide rates were noted to be 2.25 times greater than Māori female suicide rates in 2008 (Ministry of Health, 2010). Female Māori suicide rates have been noted to remain lower and more stable than male Māori suicide rates in New Zealand over the last century (B.J Deavoll et al, 1993). Māori males (Figure 1) have higher rates of suicide when compared to male non-Māori suicide rates. In 2008, the age-standardised rate of suicide for Māori males was 18.9 deaths per 100,000 population in 2008, in contrast to the rate for non-Māori males of 16.4 per 100,000 population (Ministry of Health, 2010).

Similarly female Māori rates are higher than non-Māori female rates although because of the small number of suicides recorded for females this difference is not statistically significant.

Similar trends between indigenous and non-indigenous populations are seen across the Tasman. One Australian study reported indigenous suicide rates as 2.2 times higher than non-indigenous groups between the years of 1994- 2007 (Diego De Leo et al. 2011). The greatest disparity observed lies among the younger population, which is an almost identical pattern to that observed here in New Zealand. Alarming statistics around indigenous suicides has prompted the need to investigate the underlying causes and risk factors that are at play.
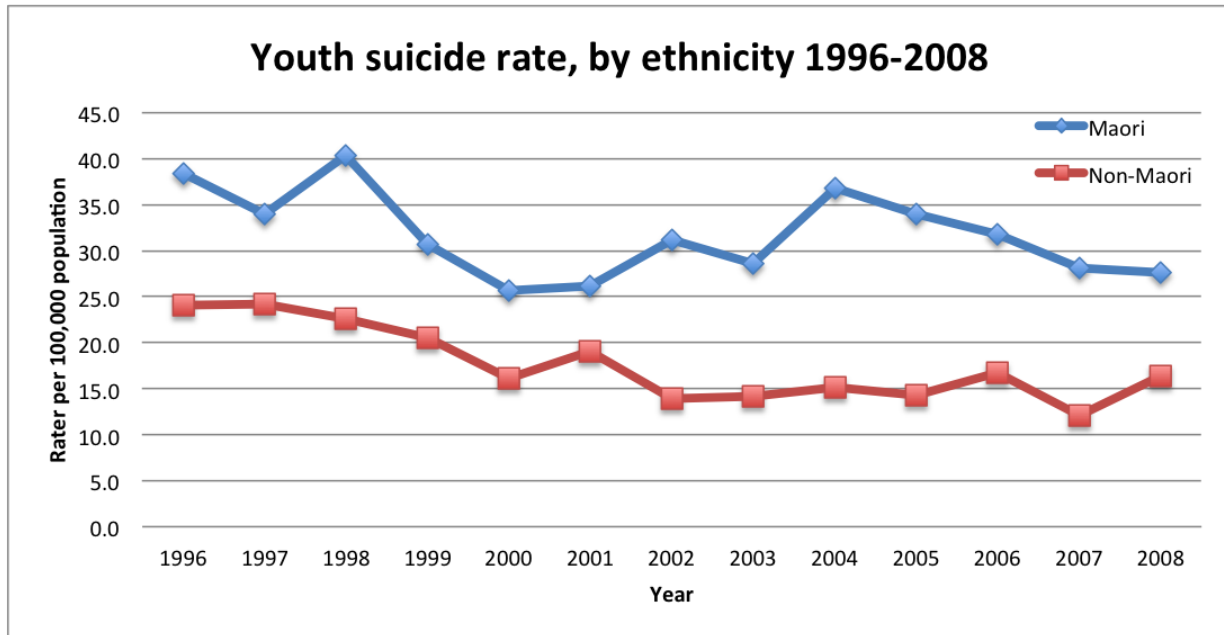
Figure 1. Age standardised Māori and non-Māori suicide rates by sex, 1996-2008

Source: Ministry of Health, New Zealand.

Figure 1 clearly depicts the volatile suicide rates among Māori groups. Male Māori suicide rates do not appear to show any particular trend between 1996-2008, in contrast male non-Māori suicide rates are shown to be gradually decreasing. Female suicide rates are much lower in both Māori and non-Māori groups. Female rates are dealing with very small numbers which means trends observed are not likely to be statistically significant.

Figure 2. Show Māori and non-Māori youth (15-24 year age group) suicide rates between 1996-2008.

Youth suicide rate, by ethnicity 1996-2008

Source: Ministry of Health, New Zealand.

Figure 2 shows Māori youth suicide rates have remained consistently higher than non-Māori suicide rates between 1996-2008. Māori rates appear to show no overall trend in contrast to non-Māori rates that appear to show a downward trend with less variable rates from year to year. In 2008 the ratio of Māori:non-Māori youth suicide rate was 1.7 and as discussed in the previous section above this age group shows the greatest disparity between Māori and non-Māori.

Suicide in Indigenous Populations: Explanations

Suicide among indigenous populations is a recognised issue throughout the world: Aborigines in Australia, Native Indians in America, Inuit and First Nation populations in Canada and Māori in New Zealand (Hunter and Harvey, 2002). Suicide rates in these populations are notably higher than the non-indigenous population, indicating that there is a need for targeted interventions to be implemented. Studies and statistics show there are clear inequalities present between the indigenous and non-indigenous populations in these countries, but it is thought that these inequalities alone (for example, lower socioeconomic status, poverty and reduced access to health resources) do not account for the large gap in health (Walters et al., 2011). Factors leading to higher rates of suicide among indigenous

people have been suggested to also be linked to cultural alienation, impact of history through inter-generational modeling (historical trauma) with both biological and behavioral transfer, and identity confusion (Beautrais, 2003).

The concept of historical trauma acts to explain a large part of this inequality. Historical trauma is defined as "an event or set of events perpetrated on a group of people, who share a specific group identity, with genocidal or ethnical intent" (Walters et al., 2011). This concept can be applied to suicide. Beautrais and Fergusson (2006) propose two theories, similar to historical trauma, to explain the high rate of suicide among Māori. Both of these theories are similar to those proposed in the USA, Canada and Australia (Hunter & Harvey, 2002) .The first is that they are due to the inequalities in education, health, welfare and justice between the Māori and non-Māori population in NZ. The second theory is that it is due to factors that uniquely apply to Māori and the experience of colonisation.

There are several notable differences between the Māori and non-Māori population in NZ which may account for the differences in suicide rates. The 2006 census (Statistics New Zealand, 2012) reported that the median age for Māori was 22.7 years compared with 35.9 years for the total population. This younger Māori population is a risk factor because as the ratio of adolescents in a population increases so do the difficulties that they face (Hunter and Harvey, 2002). Another notable difference is that Māori adolescents who have contact with National Child Welfare services have an increased rate of suicide than non-Māori who access these services (Beautrais and Fergusson, 2006). Beautrais and Fergusson also mention youth who are in the welfare system have an increased exposure to adverse disadvantaged and dysfunctional childhood environments which may increase the susceptibility to mental illness and suicide. Further risk factors for suicide include unemployment and incarceration, both of which are a significant problem in the Māori population. With an increased exposure to unemployment, there is an increase in suicidal ideation and suicide attempts (Fergusson et al., 2007). In 2011, the unemployment rate for Māori was 13.4% compared to non-Māori at 6.5% (Department of Labour, 2012). In the 15-49 year age group, 25% of Māori suicide occurred in custody, compared with 1.7% of non-Māori suicide (Skegg and Cox, 1993).This is likely due to the involvement of the court system and the ramifications of uncertainty in regards to prison. Lack of contact with mental health services may also contribute to increased risk of suicide. Westerman (2004) states that indigenous peoples have reduced contact with mental health services and, if they do, it is for a shorter period of time, often when the disease is chronic. Reasons for this may include a lack of incorporation of

indigenous concepts of health and well-being into the health system as well as the failure of the Mental Health system to acknowledge holistic mental health approaches to well-being. Two predominate Māori health frameworks used within health care are Te Whare Tapu Wha and Te Pae Mahutonga (Māori Health, 2012).

The impact of colonisation has been linked to the apparent rise in suicide rates among Māori over the last few decades. Māori social structure is underpinned by cultural values, which in turn are underpinned by tikanga and kawa and emphasise the importance of whānau, hapu and iwi. These values were undermined with colonisation and the implementation of Nationalism and liberal democracy. This was followed by implementation of policy and process that disestablished Māori social structure by dislocating Māori economically, culturally, politically and physically. These values were also undermined with the introduction of industrialism in the mid 1900's and a subsequent shift to a focus on individualism (Ministry of Health, 2005). As Māori are used to being part of a collective group, it may be difficult to adapt to this individualistic society which offers fewer opportunities for social identities (Beautrais and Fergusson, 2006). It has also been suggested that Māori people have suffered greater compared to other indigenous groups because they underwent a very rapid rate of change following large scale European settlement over only a short period of time (Ministry of Health, 2005). Subsequent loss of cultural identity and cohesion between tribal members and groups through the impact of colonisation could contribute to the vulnerability of Māori to suicide (Ministry of Health, 2005). Interestingly, it is important to note that the impact of colonisation and historical trauma seems to be absent in the older generation of Māori (over 45 years), who have lower rates of suicide. Suicide among Māori aged over 45 years is almost non-existent (Ministry of Health, 2008). This raises the need to investigate culturally specific factors within this age group as a potential protective measure against suicide. Better understanding of the statistics can help to implement a focused Māori prevention strategy targeted to those most at need.

New Zealand Suicide Prevention Strategy

Before we discuss the details of social marketing and community development, it is important to look at the current Māori suicide prevention strategy in NZ. The New Zealand Suicide Prevention Strategy (2006-2016) has been implemented to decrease suicides among the whole New Zealand population,

including Māori. Some of the relevant goals include reducing the difference in rates between Māori and non-Māori, making sure actions are consistent with Māori needs and utilising Māori concepts of hauora (health) and whānau ora (Māori families being supported to achieve their maximum health and wellbeing). The NZ Suicide Prevention Strategy (2006-2016) also states the need for increasing and building on existing evidence based research on Māori suicide behavior (Ministry of Health, 2006).

Social Marketing

Since its conception in 1971, the definition of social marketing has been under debate. For the purposes of this analysis, the Donovan & Henleys (2003) definition will be used. This defines social marketing as "the application of commercial marketing technologies to the analysis, planning, execution and evaluation of programmes designed to influence the voluntary or involuntary behaviour of target audiences in order to improve the welfare of individuals and society". Social marketing attempts to persuade a specific audience to a lifestyle idea, lifestyle practice or lifestyle product mainly using media (Ling et al, 1992). The difference between social marketing and commercial marketing is that the benefit lies with the community and not with the marketer (e.g. profit and publicity) (Donovan & Henley, 2003).

Social marketing has three fundamental principles. The first is the transfer of information that can be used to inform a social and/or behavioural change. The second is client orientation, which is possibly the most important idea for a NZ setting because an understanding of the target audience, in terms of current behaviour and those engaged in it, is paramount to a successful campaign. The third principle is careful strategic planning which involves appraising the situation, defining the problem, assessing resources, and formation of a solution (Hastings, 2007).

Social marketing in NZ has been applied to many issues such as sun safety (SunSmart campaign), road safety (Land Transport Authority Campaign), anti-smoking "It's about whānau" advertisement campaign, mental illness (Like Minds Like Mine), and most recently the "Start the conversation today" suicide prevention campaign. The 'Like Minds like Mine' was a Ministry of Health initiative to reduce the stigma and discrimination of mental illness in NZ. An independent agency was used to assess its efficacy. Promising results showed a considerable number of people with mental illness reporting reduced stigma and discrimination over three years prior to evaluation (Perese et al, 2005). In the context of targeting a Māori population, few evaluations have been done on the effectiveness of social marketing. However,

client-orientated strategies will address cultural values of Māori if done adequately and appropriately (Perese et al, 2005). One evaluation by McPherson et al (2003) that has been done addresses the "It's about whānau" anti-smoking television commercials. These advertisements were launched in 2001 and were evaluated, with surveys, at four months and one year. The information was gathered using a computer assisted telephone interviewing system (CATI) from a national sample of Māori randomly drawn from the Māori registry.

Māori people reported a higher recall of the advertisement containing the "It's about whānau" message compared to the other message featured in the advertisements, "Every Cigarette is Doing You Damage". At the second follow up at one year?, Māori recall of the "It's about whānau" message was 85% compared to 40% recall for "Every Cigarette is Doing You Damage" (McPherson, 2003).

An example of social marketing directly applied to suicide is the 'Reachout' web campaign in Australia that began in 1998 (Hastings, 2007). This is an internet based social change strategy that was launched in response to rising rates of youth suicide in Australia. The internet offers an anonymous, stigma-free and private way to explore issues concerning adolescents. This campaign utilised the interactive potential of the internet so youths could tailor their experience to meet their own needs. The overall aim was to increase the number of young people seeking support and the website openly promoted offline social services as well (Hastings, 2007).

The strengths of social marketing are numerous and include:

- Emphasis on specific clients
- Systematic use of qualitative methods
- Close monitoring
- Strategic use of mass media
- Aspiring to high standards
- Realistic recognition of price

However, there are also some limitations. These include:
- Time
- Money
- Human resources

- Limited access to public health resources
- Victim blaming

Victim blaming can also occur when marketing efforts address individuals directly to encourage a behaviour change, thus implying individuals are responsible for their own problems even though they may have little control over their situation (Ling et al., 1992).

Advertising is a key concept of social marketing and there are well recognised complications that arise with suicide themes in the media. This may cause problems with the efficacy of a campaign dealing specifically with suicide. Research findings suggest certain ways of describing suicides in the media contribute to "cluster suicides" which has caused health professionals to impose guidelines on the reporting of suicide (Tully, 2004).

Limitations in defining the audience with regard to a nation-wide marketing campaign can occur especially for Māori. There is not one definition of Māori culture or society. There is diversity within the Māori population at the iwi, hapu and whānau levels. This is where community development draws its strength because it is working with the core unit of influence within a community. whānau influence extends well beyond the household and family unit right into the body of the community to influence its functioning from the inside out (Durie, 2001).

Community Development

The concept of community development involves a group of people with a shared identity interacting in order to come up with ideas, ways to improve and also solutions to problems (Cavaye, 2006). In the context of our project, it can be translated to working within Māori communities in order to define the main issues of Māori suicide, and interventions to help reduce Māori suicide rates.

There has never been a clear community development program in NZ targeting Māori suicides, but some strategies have been used that incorporate elements of community development. One example is the Kia Piki te Ora o te Taitamariki strategy (Ministry of Health, 2000). This strategy is aimed at strengthening whānau, hapu and iwi and focuses on cultural development as a protective factor against taitamariki (youth) suicides. This project has grown to incorporate Kia Piki te Ora (Māori adults). It

encompasses a vast array of service providers such as mental health, social, community and information services.

International literature highlights that indigenous community development increases awareness and readiness to address the issue of suicide, as shown in Alaskan Yup'ik youths (Allen, Mohatt, Fok, Henry, & Team, 2010). In a review of community development among American, Canadian, Australian and Pacific indigenous populations, it has been shown that communities have more control in defining aims and setting up administration, along with the opportunity to make use of their local knowledge, skills and resources (Smith et al., 2003). Another benefit of community development is that it has the potential to be cost efficient and self-sustaining, as it promotes independence of the community, reducing the need for paid professionals (Lucke, Donald, Dower, & Raphael, 2001.) in light of this, Lucke et al. also mention problems with funding. Community development is often unsuitable to be assessed quantitatively as there is no distinct intervention or clear independent outcomes. This makes acquiring government funding difficult because doing so normally requires proof of significant outcomes and cost efficacy.

Due to paucity in the literature relating to Māori suicides and community development, we examined literature from other public health areas to see if they could be applied in Māori suicide prevention. A meta-analysis of ten community action projects across NZ was done by Greenaway and Witten (2005). These projects included the Moerewa Community Project, Waitomo Papkainga Tracker Project and the he Rangihou New Day Project. They identified common themes of what was successful and unsuccessful. Strong leadership skills, sufficient networking, coordination and resources were among the priorities of successful community action projects. On the contrary, they noted that funding was often short term, and there was often no clear strategy for sustaining the project in the future (Greenaway, 2006). Further specific examples of community action projects include the Piha Community Action Initiative Liquor Ban (Conway, 2002), and also Community Action to Reduce Rural Drink Drive Crashes in New Zealand (Stewart & Conway, 2000). These community action projects have shown positive results, and showed similar themes to those mentioned in the meta-analysis by Greenaway and Witten. Although the themes from other community development projects cannot be directly generalised to fit into Māori suicide prevention, it may serve as advice in future initiatives, and also something we kept in mind when conducting expert interviews and thematic analysis.

Results

In the first part of this section we will discuss the results from our thematic analysis of the interviews completed. Several major themes arose from the interview data, including the advantages and disadvantages of social marketing and community development, as well as other key points. These are listed under their respective headings below. Secondly, we will discuss the benefits and challenges of doing a cost-benefit analysis of social marketing and community development, as well as the results from the cost-benefit analysis of suicide itself.

Key themes from interviews

Advantages of Social Marketing

"10 or 15 years ago, this wasn't something that was talked about"

(Professor Sir Mason Durie)

A strong theme that came through in many of our interviews was the potential benefits of social marketing as a Māori suicide prevention strategy. These benefits can be grouped into four main categories; raising awareness, destigmatising suicide, reaching out to a greater population and using social networking as support forums.

Social marketing and use of the media has a large role in raising awareness for suicide and if carried out correctly, has the power to begin conversations around suicide. This is an important part of any intervention as it "*makes people aware of the problem, whereas otherwise they may not have been*". (Witi Ashby) The use of social marketing campaigns is a very effective way to move suicide away from being a scarce event that only happens in a specific population, to a problem that involves everyone. Once awareness is raised it will become something that *"You can't push it under that carpet"* (Mike King), but something that we all have a responsibility to deal with. The benefits of raising awareness through a social marketing campaign go beyond simply alerting people to the issue. It can also have further benefits according to Mason Durie "*Increased awareness is not the same as reducing the problem, but it is probably a step towards that*" In some cases it can also be enough to stimulate healing without the need for further intervention. This is affirmed by Keri Lawson Te Aho who states,

"Promoting awareness may infact be the start of an intervention in itself."

Once awareness of suicide has been raised and the conversations have started, destigmatisation of suicide is the flow on effect. According to some of our experts, destigmatisation is the first step forward in reducing suicide levels. It starts with a conversation, and can lead to a life saved. This theme is a recurring theme identified by Life-line in a recent suicide prevention media campaign "start the conversation". So if we can start conversations all around New Zealand, we can save many lives. The stigma around suicide is often put in the too-hard basket, no one wants to deal with it. However, interviewees have identified that we can't move forward with suicide prevention if we don't address the reasons for the stigma around suicide as this is a barrier to prevention.

"First you have to think about, what are the barriers? what are the reasons why people don't talk about it? And then start to look at...well if those are some of the barriers then what are the solutions to helping to break down some of those barriers"-Materoa Mar

Another benefit identified by interviewees is that social media has the ability to reach out to a large audience.As one commenter suggests, social media "Gets out to the back blocks" - Michael Naera. Therefore social media is beneficial for targeting rural and isolated communities who may not have access to specific health resources and interventions. Social marketing is a useful tool to disseminate information to the masses and, providing the message is clear, will have a widespread effect of raising awareness in communities.

"I think that anything that encourages our whānau to have that conversation to know that it's actually okay to talk to somebody is great" - Pahia Turia

According to statistics mentioned earlier and from the experiences of our interviewees, the group with the highest risk is our youth. As the use of social networking sites grows exponentially daily, this can be a valuable resource to reach out to our youth, in a forum that they are comfortable using. This is supported by Keri Newman who believes that, "*Facebook and Twitter type things are really good avenues and forums to let people speak.*" And further to this, Keri Lawson Te Aho mentions that "*Facebook and online forums create natural support systems which are extremely valuable*" The

potential benefits of using social media and the internet are vast and can be used to complement any Māori suicide prevention strategies to improve their effectiveness. Mason Durie states that-

"What we've got now is skype and emails etc so that distance is no longer a barrier to communication. It actually might mean that whānau are more cohesive"

Embracing the benefits of social marketing can have a positive impact on Māori suicide prevention if it is used in the correct way. Raising awareness, destigmatising suicide, accessing hard to reach populations and using social networks sites as support forums and means of communication are just some of the benefits we can expect to see from a social marketing campaign which aim to break down some of the barriers to Māori suicide prevention.

Disadvantages of Social Marketing

During our interviews we identified several problems with the use of social marketing in the prevention of suicide amongst Māori. Some common issues were:

- High costs of running a social marketing campaign
- Difficulty of health practices to cope with the high response due to a media campaign
- Lack of culturally appropriate approaches necessary to influence Māori
- Lack of impact a social marketing campaign may have on someone contemplating suicide
- Lack of expertise in designing and utilising media campaigns

The high economic cost of a large scale social marketing campaign came up in many of our interviews. To launch such a campaign, a large amount of funding is required. Particularly, DHBs or the Ministry of Health may not be willing to fund such campaigns due to costs. Smaller organisations do not have access to funding necessary to launch a nationwide campaign, but may be able to use social marketing on a smaller scale, such as using local radio or newspapers. This is a salient issue when considering that a national campaign may not reach those residing in rural areas are relatively isolated The use of radio and the newspaper is particularly useful when targeting those who have lower incomes and maybe less likely to have Internet access or television.

A pertinent issue that emerged from interviews was the overwhelming response to a social marketing campaign leading to a demand in services. Moreover, the inability of services to provide adequate resources to cope with the increased in demand. Furthermore, the campaign in itself may not be enough, and there needs to be organisations and people in place to service the message that the social marketing campaign is promoting. For example, services may require additional support such as counsellors, social workers and other experts. Without the services functioning at ground level behind a media campaign, the strategy may have little effect, and in some cases, the infrastructure may not be there.

In order for a social marketing campaign to be effective for Māori communities throughout New Zealand, experts suggested that social marketing needs to be targeted to Māori. Often interventions do not have the same effects on Māori as they do on non-Māori.

> *"Those (cigarette packet graphic pictures) don't work for Māori but if you put a picture of mokopuna on them, that would work." – Michael Naera.*

Another aspect to this is that each Māori community is different. There are differences in the way that each iwi views suicide and the tikanga around suicide can also vary. These differences may mean that different social marketing approaches may be better in different communities, and a one-size-fits all campaign may not be 100% effective. This emerged from some of our interviews, but there were also some conflicting views.

> *"I think that there is some generic principals that will be applied regardless of where and who we are working with." - Pahia Turia*

One of the main issues that came out in the interviews is that social marketing alone will not prevent many people from committing suicide.

> *"When you're right on the edge of the cliff, all social media goes out the window, you just wanna talk to someone who's standing at the edge of the cliff, or who has stood at the edge of the cliff with you, someone who is a beacon of hope - someone who knows exactly what you're feeling and yet they're talking to you like you're a normal person." - Mike King*

The simple problem with social marketing is that, while it may enable someone to get other help and may raise suicide as an issue in New Zealand, it alone is unlikely to stop someone who is determined to commit suicide.

> *'I think the research into it [effectiveness of social marketing] is developing, really.' - Professor Sir Mason Durie*

Another barrier to using social marketing as a tool on a smaller scale is that many organisations with limited funds may lack the expertise and experience to use the media effectively. There is a risk of causing suicide if it is brought to the attention of people in an inappropriate way. This means that expertise is important when using social marketing as a method of suicide prevention to ensure the message is delivered in an appropriate way. The possibility of it all going wrong means there is an apprehension associated with using social marketing in this way.

These issues, identified by our interviewees, are important to consider when using social marketing as a tool of suicide prevention in the New Zealand context.

The Positives of Community Development

Community development was viewed overall as a positive intervention by all our experts, and indeed was one of the main objectives of their respective intervention programs. Community development involves guiding communities to develop their own support and education mechanisms and directing these toward areas of need (such as suicide prevention). Broadly speaking, we found that the great benefits of community development include its ability to address the proximal and distal determinants of psychological health, its ability to be tailored, and its use of resources already present in the community.

Interviewee's suggest community development works well because it addresses the proximal and distal determinants of psychological health. Proximal determinants include strengths such as increased cultural identity, a sense of belonging and more general things such as education. Many of our experts believe that historical trauma and a loss of cultural identity among Māori has led to poor whānau

resilience, and a lower sense of belonging and social cohesion, particularly among youth. Many experts believe that Māori need to have their cultural roots re-established to create more resilient whānau. Pahia Turia exemplified the importance of whānau resilience by the quote

"Anything that increases whānau resilience is suicide prevention".

One advantage of attacking proximal causes of psychological health is that it is a primary prevention. One expert estimated that 80-90% of money *"poured into communities"* was *"paying for the ambulance at the bottom of the cliff",* and that real change would be observed when we focus investment on keeping healthy individuals well. Others commentators suggest that community development would improve support for those already affected by suicide through increased awareness and a forum to share their experiences. Therefore, community development can be good for both prevention and 'postvention' and is a valuable tool. Community development was identiifed as a signifcant means of Māori suicide prevention because '*Māori need the face to face stuff'* (Michael Naera). Michael Naera further suggests Māori respond more deeply to personal korero (conversation) rather than social marketing strategies.

Another broad benefit of community development is its ability to be tailored to the needs of specific communities. One interviewee suggested that different communities have '*different tikanga, different problems and different solutions'* (Pahia Turia). Therefore a more specific approach is needed. This is where community development can be more beneficial for communities and building capacity compared to social marketing. Keri Lawsons sentiments were that that local parties care more and know more about their community than national ones, and are therefore better placed to deal with the specific needs of the community. Therefore, nationally run programs and social marketing are limited in their ability to address the specific challenges faced by smaller communities and will not be as effective.

An important finding reported by interviewees suggests there is a large reservoir of resources already present in communities that are not currently being utilised.

"[We should] make better use of the strength and power that exist within the whānau, rather than always thinking that whānau are unable, and undermining whānau leadership." Mason Drurie

Interviewees also suggest a large amount of funding comes from the government and is distributed predominantly using a deficit model or ability to describe discrepancy in Māori suicide in a community.

"It's a typical deficit approach that we take to service provision. Rather than focus on keeping the well well, we pour all of our resources into the mad, bad, and sad." - Pahia Turia

Therefore, a community which shows positive outcomes are less likely to receive funding. Communities are encouraged to show deficit within their communities in order to receive support from the government, and may not contribute to building resilient communities.

Community development focuses on using the intrinsic resources of the community rather than external care programs and mental health services. This may include using influential Kaumātua (elders), community leaders, and youth representatives that already have a vested interest in their own communities. According to Mike King, one of the most valuable resources are people who have lost someone they love to suicide. He suggests these individuals can help to set up support groups and spread awareness of suicide in the community.

Another recurring idea for robust community development related to the involvement of youth and children. Giving young people a forum to share their experiences opens avenues of change to limited to academics and advisors. By using the resources that the community intrinsically has, the communities' well-being becomes self-perpetuating.

Thus community development empowers people to care for themselves and their whānau rather than just raising awareness. Overall, community development was seen as having an essential role to play in Māori suicide prevention.

"Community development is revolutionary; it is about change, it is about relocating the locus and power of control into the hands of those most affected by the issue." -Keri Lawson-Te Aho

Negatives of Community Development

Many of the experts that were interviewed regarded community development as a highly effective means for preventing suicide (particularly amongst Māori individuals). However, after conducting a thematic analysis of the interviews, we concluded that there are some aspects of community development that have been consistently recognised by the experts as ineffective or unhelpful in regards to our goal of preventing suicide amongst Māori individuals.

Mike King was a strong supporter of the idea that *"suicide is a global problem",* and therefore it should be addressed on a wider scale than local approaches such as community development. A mass media suicide prevention campaign was an example of a nationwide approach that could address this. Mike King alludes to the idea that suicide is a problem not only 'owned' by Māori people, but also, a major issue in the non-Māori population of New Zealand. Therefore, a community development approach that is specific to preventing Māori suicide may not be effective against the issue of suicide in its entirety. It was also suggested that programmes specifically targeted towards preventing suicide in Māori may lead people to believe that suicide is problem belonging only to Māori. We believe this could have negative effects for Māori, such as leading them to believe that suicide is an inevitable problem for them. This has the potential to reduce hope and interest in suicide prevention strategies. In addition, this can also have a negative effect on non-Māori who may believe there are no issues within the non-Māori community. This in turn may result in these communities not paying attention to the problem of suicide, and overall reduce the impact of these campaigns. Mike King suggested that a mass media campaign targeted at all New Zealanders (rather than just Māori) would be the best way to create a unified and collaborative approach towards preventing suicide.

A recurring theme was that community development is difficult to execute effectively. For example, a number of our interviewees highlighted the idea that community development is time consuming, and requires a lot of energy and resources. Often communities are tied up with various different local issues, and therefore it can be difficult to get sufficient funding or resources for suicide prevention programmes. Also, communities can often be 'slow to change' in terms of developing suicide prevention programmes. Many community based interventions are not overnight cures and it takes time for the changes to be seen. Different communities are known to have different methods for dealing with the issue of suicide, and these methods have often been ingrained into the community over many generations.

In small communities things such as family relationships may get in the way of conducting an effective community development strategy. For example, if one family is trying to promote a community development plan, another family may choose not to collaborate as a result of past history of conflict between those families. This may be particularly relevant to Māori families that perhaps associate with different iwi or marae. Keri Lawson-TeAho also pointed out that *"There is often a fear of approaching subjects such as suicide which have traditionally been considered as taboo."*

Community development is not as far-reaching as other prevention strategies, such as social marketing. For example, some towns and cities that do not fit in a particular DHB (District Health Board) region may get left out of community-targeted interventions. This is particularly a problem for rural communities which lack sufficient resources and funding for community development plans to take place.

Community development needs to be sustainable. If a community intervention is to be successful, it requires a steady source of resources and financial support (ideally, it would be self-sufficient), as it needs to be implemented over a relatively long period of time to be effective.

Some of our interviewees described how it is difficult to monitor the effectiveness of community development strategies. This is somewhat a result of these interventions being 'tailor made' to their respective communities, therefore there is no standard way for assessing their effectiveness. Monitoring is however required so that appropriate adjustments can be made to the interventions and to get a gauge of their success. For this reason it is important to develop a universal means of assessing these respective community based interventions, in order to measure their effectiveness and make any changes to their application.

Interviewees pointed out that it is often difficult to coordinate community interventions. There is a need for increasing the communication between different prevention programmes so that they can collaborate and reduce the issue of suicide more effectively. Irene Walker exemplified this theme when she said, *"I'm almost a one man army here".* She also described how intervention programmes seemed to pop up and disappear in a relatively spurious manner within a community.

There was also recognition that people are trying to implement community development at a government level. The problem with this is that it is not actually filtering down to the community and

reaching the people it needs to. Witi Ashby described how people in government are often distanced from what is actually happening in the community. Therefore, there is a need for increased communication between front-line community workers and governmental policy-makers to reduce this gap and allow politicians to see what the people in the community (who are on the "front-line" of the issue) need in order to achieve effective suicide prevention.

As of today there has been little implementation of community development strategies within New Zealand, so there is limited evidence to show whether it is effective or not.

> *"Community development up to this time is quite limited, I am curious on how effective some of the community strategies have been." - Paea Paki*

Other Important Themes

In addition to the main ideas, a number of other points that came through in the interviews related to community development and social marketing warrant discussion, these are discussed below.

A theme that came through very strongly in a number of the interviews was that every case of suicide is different. There are different circumstances and motivations causing the suicides and there are different methods of committing suicide. These differences are in relation to not only Māori vs. non-Māori suicides but were also different between community groups of Māori (e.g. one iwi vs. another iwi). For this reason it has been suggested that it is hard to have one intervention that will fit everyone and work in every circumstance, and it is particularly important to use a multifaceted approach. For example, health services need to work with the communities to see what resources specific communities require in order to deal with their problem. Once these communities have the resources they require they can then work at addressing the issues within their own community.

Another example where current approaches should be altered to be more case specific is in New Zealand's whole suicide prevention strategy (2006-2016). The 'All-ages Suicide Prevention Strategy' says it is "building on past initiatives" based around youth suicide when addressing all-ages, however it seems that these past initiatives have not been effective at all. The strategy is good in that it attempts to address the whole population, however the youth and particularly Māori youth still have the highest

rates of suicide. Surely it should follow that Māori youth should be the focus of any suicide prevention strategy and the majority of resource distribution should be going to address this problem specifically.

We asked the interviewees what they thought the major causes of suicide were, especially within the Māori population. Some of the common causes discussed were:

- Drugs and alcohol
- Social disadvantage
    - Lower levels of education
    - Less economic stability
- Colonisation/historical trauma - Cultural Alienation
- Partnership breakdown

One of the reasons why some of these are significant issues in the Māori community is due to multiple generations of dysfunction have resulted in unhealthy and risky lifestyles becoming normalized. Pahia Turia pointed out this problem, *"They (the kids) think, it's normal to see mum getting a crack, it's normal to see people getting on the piss six nights a week. It's normal for our people not to have jobs. All this stuff has become normal behaviour... How do we employ and engage strategies that actually reduce the threshold where our people say, that's not normal."* The Māori population is particularly vulnerable as risks are highest where poverty is the highest and many Māori do not have the luxury of choice as in more affluent settings. It is therefore important that steps are taken to address these ingrained mindsets.

In a couple of the interviews, glorification of suicide was raised as another potential problem. This can be an issue which affects the youth in particular. Witi Ashby spoke of how the tangihanga if interpreted the wrong way, could lead to an inadvertent glorification of suicide, making it seem more acceptable and prompting more people to consider it as a possible option. In much the same way as a poorly marketed social media suicide prevention campaign could potentially give people ideas about suicide, the celebration that is the tangihanga could lead to increased consideration of suicide. Witi gave the example of a full school haka at a tangihanga, whilst not intending to glorify suicide, the fact is, it can have this effect. Emma Kutia told a similar story illlustrating the same point.

Despite every situation being different, it is important that interventions are applied using Te Ao Māori principles. Te Ao Māori literally means 'the Māori world' and in this context this means using integral parts of the culture to reinforce ideas and strengthen teachings and messages. Te Ao Māori includes effectively utilising and promoting Te Reo (the Māori language), tikanga (Māori customs and cultural practices), and whānau to reinforce understandings relevant to Māori. In paticular, Keri Lawson-Te Aho emphasises the importance of doctors to effectively connect with Māori by utilising aspects of Te Ao Māoi as *"The clinician can't go home with them [the patients]"*. She further suggests whānau participation can be a particularly effective way of doing this. The inclusion of aspects of Te Ao Māori will ensure that messages are delivered in a meaningful and relevant way, as the doctor cannot be with the patient all the time. Using whānau as a resource to deliver messages helps in reinforcing messages and ensuring understanding as well as helping in the ongoing support of the patient. Incorporating tikanga ensures that the messages are made more relevant to Māori and increases the likelihood of good adherence and a positive outcome.

"We underestimate the significance of Whānau" -Professor Sir Mason Durie

The principles of Te Ao Māori can be applied no matter what intervention. Applying the principles is important in developing strong cohesive relationships with Māori and their whānau and within whānau itself. It encourages strong leadership, promotes economic opportunities & employment, and allows for active process of cultural identity reclamation that is essential to improving health outcomes and more precisely suicide outcomes As identified by Pahia Turia who suggests *"anything that builds the strength and resilience of the whānau is suicide prevention."* The most effective ways of achieving these outcomes is to promote these principles in a way which is relevant to Māori, and this means the incorporation of Te Ao Māori.

Without downplaying the importance of applying Te Ao Māori in suicide prevention techniques, Witi Ashby suggested that cultural identity may no longer be such a significant protective factor as it has been in the past. Recently, this year in particular, there has been a raft of suicides in people who are in touch with their roots and whakapapa (family genealogy). This is particularly worrying and we now need to ask the questions as to why is this occurring. One suggestion is that cultural identity and whakapapa is no longer enough when suicides are related to drugs, in particular 'P' (methamphetamine), or with relationship breakdown. However, despite this string of suicides in people in touch with their

whakapapa, we can still use cultural tools to bring others back into alignment. In addition, it is now obvious that an important step in suicide prevention is to target some of the key causes of suicide. For example, targeting the drug and alcohol problem is particularly important in reducing the suicide risk amongst Māori.

The importance of interaction between health practitioners and their patients was highlighted as being of particular importance. Interviewees suggest practitioners need to be culturally competent when working with Māori in a way which does not cause offence. This can be particularly important with the Māori patient as the Māori patient and whānau are often prone to not interacting with the health practitioner until there is a crisis and until it is too late. This is because historically there has been distrust harboured between the Māori patient and the doctor. It is essential that doctors try particularly hard to foster good relationships with their Māori patients. If Māori stop coming into see doctors then there is no way they can be helped.

Another reason for this lack of interaction is that Māori men are sometimes guilty of suppressing their emotions. *"There is a typical mentality around what it means to be a man. We don't show emotion, we're hard, we're tough..."* (Pahia Turia). Men do not discuss their feelings and they often end up feeling ostracized if they do and even more ostracized if they don't. This can cause damage to a person's taha hinengaro (mental well-being) and in time increase their risk of suicide. Whilst this is not a problem unique to Māori men, it is still of particular concern. Māori men and indeed all men should be taught to share emotions from a young age. It is an ongoing problem in our society that men feel they cannot show emotion or 'weakness'. The John Kirwan depression campaign has gone a long way at beginning to address this problem but there is still a long way to go. Men and Māori men in particular need to be taught that showing emotion is important in ensuring their mental well-being or taha hinengaro.

A true man is, *"loving, affectionate, strong enough to show emotion"* - Pahia Turia

Lastly, it was suggested that one reason why suicide rates have been on the rise in recent years is that the focus of the community has shifted, resulting in community health in general to be on the decline. Informants suggest one possible reason for this is that Treaty of Waitangi claims are possibly taking away focus from key issues like community health. Although it could be argued that Treaty claims are in the best interests of the community and will provide the resources to better address community health

needs, it should also be considered that they should not come at the expense of community health. This is not the case in every community but is an issue that can be considered none the less.

"They (the forests) will outlive us, they will still be there.. we need to look after us first."
- Witi Ashby

The Costs and Benefits of Suicide and Suicide Prevention

A cost-benefit analysis (CBA) was initially intended to evaluate social marketing versus community development in Māori suicide prevention. It offers us the opportunity to closely examine the values of these interventions and derive conclusions on which method is more cost-effective. However challenges were encountered in the process of data collection that hindered us to pursue it further. Instead, we focused on some detailed discussions of the costs of suicide in various aspects, namely economically, culturally, politically and socially, in which the importance of Māori suicide prevention in preventing these costs to the society and the individual is emphasised. Below we list out the potential advantages a CBA analysis would offer us and the need for future research in this area, followed by the exact challenges we faced, and the detailed analysis of the various costs of suicide to the individual and the society.

What a CBA Could Potentially Offer

As illustrated in previous chapters, Māori suicide is a significant health problem in New Zealand that calls for effective targeted interventions. Social marketing and community development are the two most common approaches. However, it remains unclear which method is more cost-effective and what intervention we should put more investment in to achieve the maximum benefits. CBA is a common approach in health economics to answer this question. The costs of the exact intervention is calculated in monetary terms and related to the benefits of the intervention, i.e. how many suicides are prevented, resulting in a cost-benefit ratio of the economic cost per suicide prevented or per life-year saved. This information would give us concrete quantitative evidence of the effectiveness of a particular intervention program, informing us what intervention is better at achieving the outcome, providing objective information for policy makers, and allow us to understand and design better interventions for

the future. However as stated in the next section, a CBA of social marketing and community development is difficult to carry out at the current stage, and in regards to the potential wealth of information a CBA could bring us, future research in this area is strongly needed to advance our understanding and action in the field of Māori suicide prevention.

Challenges

In the process of data collection for CBA, a few challenges were faced that require future research. Firstly there is a lack of quantifiable data on the benefits of social marketing and community development in suicide prevention. As stated previously, the trend of Māori suicide has been erratic over the years showing no convincing downward trend. This made it very difficult to quantify the benefits of the interventions, and without any quantifiable data, a CBA could not be carried out. Secondly as introduced in the background section, there has been little social marketing and community development programs specifically targeted to Māori suicide prevention, therefore making it hard to pin down a monetary cost to either strategies. Lastly due to time-constraint of the project, a CBA was not practically achievable within the time-frame. Therefore more research on the effectiveness of specific Māori suicide prevention programs is required. The Multi-level Intervention Suicide Prevention Study currently being carried out by the University of Otago (funded by the Ministry of Health) may be able to provide more insight into the effectiveness of suicide intervention activities in New Zealand and guide future developments in this area.

Tangible Economic Costs of Suicide

As elegantly shown in Des O'Dea's work in 2005 (O'Dea, 2005), suicides cause considerable economic losses to the society. Using the market value of 2004, it is estimated that each suicide poses an immediate economic cost of $10,204 including the cost of funeral, police involvement, fire services, coroner and victim support. Much more significantly, the economic cost posed by suicide is the loss of production. With a high proportion of suicide in NZ being youth, the number of years lost to production is enlarged and on average each suicide is associated with an income lost production of $438,000. In total, the cost of each suicide is $448,250 using 2004 dollars excluding GST. According to the latest figure on NZ suicide rate in 2008 (Ministry of Health, 2010), there were 497 cases of suicide in 2008 resulting in a total cost of $222.8 million. Out of the 497 cases, 82 were Māori resulting a loss of $36.7 million.

The $448,250 associated with each suicide was calculated on the basis of suicide of the whole population in New Zealand. In the context of Māori suicide, the associated economic cost is likely to be more. The involvement of larger whānau, more need of victim support and a much higher proportion of Māori suicide in the youth group all contribute to the greater economic cost associated with Māori suicide. Therefore Māori suicide prevention poses significant economic gain.

Number of Disability-adjusted Life Years (DALY) Lost to Suicide

In addition to the tangible economic loss associated with services provision at the time of suicide and the associated loss of production, the number of life years lost is an important consideration in the context of evaluating suicide prevention. Unlike any other conventional health interventions such as medical procedures or drug therapies, suicide prevention is associated with substantial gain of life years. Nearly half of Māori suicides happen in those aged 15-24 years old. The potential gain of life years in preventing suicide in this age group is substantial and makes Māori suicide prevention an effective health intervention of achieving significant health gain. Using the latest data on the suicide rate of Māori and non- Māori in 2008 (Ministry of Health, 2010) and the NZ life table 2005-2007 (Statistics New Zealand, 2008), it is calculated that for every Māori suicide prevented 44.02 DALY is gained, as compared to the 39.68 DALY gained by a prevented non- Māori suicide, highlighting the value of effective Māori suicide prevention strategies. Detailed calculation is outlined in Table 1 in Appendix 3.

Political Costs

The deaths due to suicide and road accidents are very similar. In 2008 497 people died from suicide compared to 366 people from road accidents (Road Death Statistics, NZ Transport Agency). Despite this, suicide continues to receive considerably less attention from the local and national policy makers, cementing its place as the figurative 'political hot-potato'.

It is likely that such discrepancies stem from the widespread stigmatisation of suicide among the New Zealand public, whereby the media are increasingly reluctant to report suicide. Conversely, fatal motor vehicle accidents are reported frequently and are not considered as 'taboo' in nature.

Consequently, there remains little public pressure or lobbying for the government to address our national suicide crisis. Hence, from a political viewpoint there is little to be gained or lost by political intervention on any level. The, exceptions to this is the Mana, Māori and former Alliance party who have pushed for change. One particular government stimulated initiative was the creation of the 'All-ages Suicide Prevention Strategy' (Health, n.d.). This is a strategic plan between 2006-2016 to reduce suicide among all ages groups. Sadly these parties often lack the size to bring about further change.

Social Costs

Like many other fatal illnesses, a completed suicide has a massive impact on those closest to the victim. The grief suffered by the whānau and friends is often more severe due to the nature of the death. Some of the significant factors which can contribute to this grief include: younger age of death, the unexpected nature of the event and the uncertainty surrounding motives for suicide. Those closest to the victim will often feel a mix of grief, anger, embarrassment and guilt. Some of these feelings are closely related to the stigma associated with suicide. In Māori communities this impact may perhaps be wider-reaching due to the role of whānau in Māori societal structure.

Suicide may have some small benefits in the bringing together of a community, although for less than ideal reasons. Whilst not elevating the sorrow, this sense of 'togetherness' may lessen the grief. Thus in Māori communities, this benefit offer some protective features from mental harm.

In contrast, it may also cause conflict if varying views exist amongst the iwi regarding the best way to manage such traumatic events as suicide. For example, contrasting opinions may exist on whether or not the same kawa (etiquette) should apply to the tangi (ritual of the dead) of someone who has died by suicide compared to someone who has died by other causes. These conflicts may result in the break down of relationships between people or parties with conflicting view.

Cultural Costs

As discussed in the social costs above, suicides cause emotional turmoil within the remaining whānau and wider community. This kind of event can cause huge strain on relationships and can impact on the whānau. Kinship between whānau is one of the cornerstones of the Māori culture and subsequently one of the defining features of cultural identity. If the structure of the whānau is not intact, consequently the support systems are also disestablished. Whanau support is significant, as this lack of support and cultural identity is a huge risk factor for Māori suicide and other mental health issues. Following a suicide the breakdown of relationships is not always the result and often after a tragedy like this the community affected can take a more positive approach and come together in the face of adversity, strengthening their bonds and becoming a more resilient whānau.

Whakapapa is also an important feature of Māori cultural identity. Barlow (1999:173) describes whakapapa as "The genealogical descent of all living things from the gods to the present time" and "the meaning of whakapapa is to lay one thing upon another, as for example, to lay one generation upon another". The visualisation of this is of whānau building layer by layer upon the past, towards the present, and on into the future. When an individual commits suicide the whakapapa is disconnected due to this death and this contributes to the loss of cultural identity.

Another cultural cost of suicide is that after a suicide the whānau involved may feel let down by the health care services. This feeling of disappointment is primarily due to health services currently not being adequately tailored to Māori cultural needs. Because of this their whānau member may have slipped through the cracks of the system and this may have contributed to their suicide. These feelings of disenchantment are a huge problem as there is already a disparity between Māori and non-Māori access to healthcare and this could further increase this. In some cases the community may be motivated by these feelings of disappointment in the current services available and set up their own initiatives to raise awareness and prevent further suicide. A local example of this is CASPER a group that was set up by Maria Bradshaw after the loss of her son Toran Bradshaw. Her motivation was to provide an alternative to the medical model of suicide prevention, as she was so let down by this. She provides a supportive community group that gather and analyse data on suicide and suicide prevention; provide networking and support for families bereaved by suicide and provide education and advice to community leaders and politicians on changes to legislation, policy and practice on suicide prevention and suicide survivor support. Maria Bradshaw elaborated her motivation to set up this group via interview

"People often tell me they understand I do what I do, in order to make Toran's life mean something. They are wrong. Toran's life meant plenty, its his death I am trying to make some sense of. There are lessons that can be learned from it, that can save the lives of other children. My heart breaks every time I hear of another drug-induced suicide. My son will never have children, he will never shake hands on a business deal, write a novel or discover the cure for cancer but he can still have a legacy. Suicide kills a million people every year and those deaths are preventable. Doing what we can to prevent suicide is what Toran and I will leave behind us, when I die and our family ends."

Finally a cultural cost of suicide that can be particularly sensitive to deal with is issues surrounding burial and glorification of suicide. Some Māori take the cultural stance that those who take their own lives should be condemned rather than have their life celebrated. In a controversial column in Rotorua's Daily Post newspaper, Waiariki MP Te Ururoa Flavell suggested a "very hard stand" should be made on suicide. "If a child commits suicide, let us consider not celebrating their lives on our marae; perhaps bury them at the entrance of the cemetery so their deaths will be condemned by the people. In doing these things, it demonstrates the depth of disgust the people have with this. Yes it is a hard stance, but what else can we do?" (Flavell 2011). This attitude unsettled many including Maria Bradshaw founder of CASPER. At a recent talk in Kawerau, an area which has had a spate of sudden suicides, Ms Bradshaw spoke of the pain one local mother endured after having to challenge a kaumatua when she was told her daughter's body could not be brought back to her marae. Arai Te Uru Marae in Dunedin has also put this view into practice. The marae looked into banning tangi in cases of suicide in order to deter the glorification of suicide, but has since decided instead to restrict the tangi to a single day. Marae chairman Tom Duff described the cultural ritual in the case of suicide as a diminished affair "It's not a tangi as such, it's more like a funeral, because no one stays over or anything - they just bring the body on for their korero and go away." This approach of stigmatising those who commit suicide creates huge tension within a whānau who are already grieving and now have to comprehend the thought of their child being some sort of "whakama" or shame on the family because of their decision to take their own life under circumstances we cannot comprehend. This opinion is not widely spread and many iwi's have different, more accepting cultural beliefs and rituals when a member of their whānau takes their own life. These differing opinions about burial rituals can therefore cause cultural unease if the whānau member belongs to several different iwi's as is often seen with modern Maori.

Discussion

The problem of suicide among Māori is a serious issue and needs to be addressed immediately and effectively in order to reduce disparity and prevent the unnecessary death of more of our people. Through discussion with experts in the field, we have learnt much about the roles that community development and social marketing have to play in the struggle against suicide and have unearthed several key themes surrounding the pros and cons of each.

Community development is valuable in that it can draw on resources inherent within communities and can have a lasting and significant local effect if it is made sustainable. The main issue with community development is the difficulty in achieving the sustainability essential to allow time for communities to change.

One of the strengths of social marketing is that, unlike community development, it is able to reach the widely dispersed rural population who cannot access a community centre. It also has a powerful ability to raise awareness and de-stigmatise suicide. Another benefit of social marketing in the current digital age is the potential for its use on social media websites as a new forum of support for those contemplating suicide. The main downsides are the cost and the difficulty in implementing social marketing in a culturally appropriate manner and the danger of contagion suicides as awareness increases.

The question of what comes next in terms of Māori suicide prevention is a difficult one given the lack of objective evaluation for interventions currently in place. However, through our discussion with experts in the field we have reached the understanding that the greatest benefit can be achieved through a combination of the two intervention strategies. Most feel that the mutually exclusive use of social marketing and community development as single interventions lack the depth required to address a problem of this scale.

Community development and social marketing complement each other in the sense that the 'grass roots' ideology of community development can be retained while an intervention can also reap the benefits of nationwide increase in awareness through social marketing. By weaving together these two strategies a single unified intervention can be designed.

Because suicide in New Zealand is an ethnically disproportionate problem, it is of paramount importance that the interventions we deliver are not only targeted at Māori, but also delivered within a framework that respects and speaks to the culture. We suggest using Te Pae Mahutonga as a framework for the design of future interventions in this area. The reason for this that it considers aspects of health from a Māori point of view and is compatible with both community development and social marketing approaches. The absolute necessity of delivering interventions targeted at Māori within a culturally appropriate framework was an important lesson of our research.

Study strengths

One of the primary strengths of our research was the use of the "Te Pae Mahutonga" Māori model of health as a framework to base our project methodology around. As the aim of this study was to specifically examine suicide prevention strategies targeted at the Māori population, the use of this framework allowed our research strategies and data gathering to be carried out in a culturally appropriate manner. This framework also ensured data obtained was applicable and culturally relevant to the issue of Māori suicide prevention.

Another advantage of our study was the use of key informants who are currently active leaders in the field of Māori suicide research and Māori suicide prevention. This was advantageous as it enabled us to gain insight into current prevention strategies and limitations of these from those who are currently working to implement them. This also ensured that data gathered was current and relevant to the Māori population.

Study Limitations

During the course of our research, we encountered a number of issues that have limited our findings. The main issue we encountered was a lack of evidence for or against social marketing and community development in the both the literature review and the interviews.

We had originally planned to perform a cost benefit analysis of social marketing and community development in order to compare which was more effective at reducing suicide rates among Māori. However we were unable to quantify subjective data we had gathered from the interviews into a comparable objective measurement. As a result of this, and the lack of evidence, we decided to discontinue the cost-benefit analysis as originally planned. Instead we chose to pursue a qualitative analysis social marketing and community development. The limitation that this places on our findings is that we cannot objectively compare the efficacy of each intervention. We have however, provided an extensive discussion into the pros and cons for both interventions that can be used to inform future decision-making.

Time and resource restraints also resulted in us not conducting a logistic modelling section of the study as we had intended. Logistic modelling would have allowed us to visualise how each intervention could be implemented, however this was not integral to answering the research question.

The interview respondent rate was 58%. We do not consider this to be a significant limitation due to the qualitative nature of our study. We speculate that those who did not respond did so because of the time constraints of the study.

Conclusions

The primary conclusions we drew from the study were:

- Suicide is a serious issue among Māori and should be immediately addressed to prevent further harm to Māori communities.
- Social marketing and community development are most effective when used in conjunction with one another. Each of these suicide prevention strategies have benefits and detriments and should be used in conjunction with the other in order to provide a comprehensive suicide prevention strategy applicable to Māori.
- Prevention strategies must be framed and promoted with consideration of a Māori specific model of health. Using frameworks such as 'Te Pae Mahutonga' to emphasise key points is essential in order for the strategies to be applicable and effective within Māori populations.
- Community development prevention strategies need to be constructed with consideration of the strengths and resources already present within communities (i.e. role models/community leaders) in order for them to be most effective within the community.

Recommendations

As a result of our research, we propose the following recommendations to the Mental Health Foundation for future research or intervention plans in the area of Māori suicide prevention.

1. Due to deficits of data identified within the published literature we recommend that further research needs to be undertaken to determine the effectiveness of social marketing and community development as Māori suicide prevention strategies.
2. In addition we recommend investing in the development of robust evaluation tools for measuring the effectiveness of community development intervention programmes.
3. Future suicide prevention initiatives must utilize both social marketing and community development strategies in order to have the most beneficial and successful outcomes in preventing Māori suicide.
4. Suicide prevention strategies must be designed around a Māori health model framework to ensure they are culturally relevant and accessible to Māori people.

5. We recommend when designing suicide prevention strategies at the community level, to utilize and build on strengths present within the community (i.e. prominent community leaders/role models) to make intervention strategies more cost effective and sustainable and also more accessible and applicable to those who it is targeting.

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Appendices

Appendix 1

RANGATIRA
- Professor Sir Mason Durie, Pro Vice Chancellor, Massey University
- Dr Huirangi Waikerepuru, Taranaki Kaumatua

THE CLIENT - MENTAL HEALTH FOUNDATION
- Materoa Mar, Chair, Mental Health Foundation
- Judi Clements, CE, Mental Health Foundation
- Witi Ashby, Manager, Māori Resource Development, Suicide Prevention and Information

MĀORI SUICIDE PREVENTION RESEARCHERS
- Professor Sunny Collings, Dean, University of Otago, Wellington School of Medicine
- Associate Professor Jo Baxter, Director Ngāi Tahu Māori Health Research Unit, University of Otago
- Dr Nicole Coupe, Director, Te Ira Tangata, Māori Suicide Prevention Programme, CEO Hapai te Hauora Tapui Limited
- Keri Lawson-Te Aho, Lecturer, Hauora Māori, University of Otago, Māori suicide prevention policy writer, PhD candidate
- Keri Newman, Master's graduate, Victoria University of Wellington
- Dr Paea Paki, Clinician, Multi-level Intervention Suicide Prevention Study
- Dr Denise Steers, Clinician , Multilevel Intervention Suicide Prevention Study

MĀORI SUICIDE PREVENTION CLINICIANS
- Eliza Snelgar, Clinician, CASA

MĀORI COMMUNITY DEVELOPMENT EXPERTS (WHĀNAU, HAPŪ, IWI DEVELOPMENT)
- Pahia Turia, Director, Taipak Development Aotearoa
- Emma Kutia, Project Manager, Te Ao Hou, Kia Piki Te Ora, Eastern Bay of Plenty
- Michael Naera, Project Manager, Kia Piki te Ora, Ngāti Pikiao
- Irene Walker, Te Ao Hou, Kia Piki Te Ora, Eastern Bay of Plenty

INDEPENDENT MĀORI EXPERTS
- Mike King, TV personality and mental health commentator
- Gordon Matenga, Coroner

OTHER INVITATIONS: (Sent email invitation but did not respond)
- Jenny Jones, Regional Public Health, Capital Coast DHB
- Maraea Johns, Manager, Māori Suicide Prevention Policy, Ministry of Health
- Professor John Broughton, Otago University Dunedin Medical School
- Associate Professor Susan Pitama, Otago University Christchurch Medical School
- Marija Bakulich, Policy Manager Healthy Whānau, Te Puni Kōkiri

Appendix 2

Table1: Analysis of DALY per suicide by ethnicity, 2008

Ethnicity	Māori		Non-Māori	
Sex	Males	Females	Males	Females
Total	53	29	313	102
10–14	1	1	0	1
Expected number (#) of years of life remaining	59.13	63.76	67.47	71.39
Years of Life Lost(YLL)	**59.13**	**63.76**	**0**	**71.39**
15–19	4	12	27	10
Expected # of years of life remaining	54.29	58.9	62.58	66.45
YLL	**217.16**	**706.8**	**1689.66**	**664.5**
20–24	12	5	38	7
Expected # of years of life remaining	49.67	54.07	57.83	61.56
YLL	**596.04**	**270.35**	**2197.54**	**430.92**
25–29	5	3	29	10
Expected # of years of life remaining	45.05	49.23	53.07	56.65
YLL	**225.25**	**147.69**	**1539.03**	**566.5**
30–34	11	0	23	5
Expected # of years of life remaining	40.42	44.42	48.28	51.73
YLL	**444.62**	**0**	**1110.44**	**258.65**
35–39	5	4	25	13
Expected # of years of life remaining	35.87	39.7	43.48	46.84
YLL	**179.35**	**158.8**	**1087**	**608.92**
40–44	7	2	25	11
Expected # of years of life remaining	31.43	35.04	38.72	42.02
YLL	**220.01**	**70.08**	**968**	**462.22**
45-49	2	1	36	11
Expected # of years of life remaining	27.11	30.47	34.02	37.26
YLL	**54.22**	**30.47**	**1224.72**	**409.86**

50–54	3	0	27	8
Expected # of years of life remaining	22.97	26.08	29.41	32.57
YLL	**68.91**	**0**	**794.07**	**260.56**
55-59	0	1	31	8
Expected # of years of life remaining	19.15	21.97	24.95	27.98
YLL	**0**	**21.97**	**773.45**	**223.84**
60–64	2	0	17	3
Expected # of years of life remaining	15.71	18.21	20.67	23.52
YLL	**31.42**	**0**	**351.39**	**70.56**
65–69	0	0	11	4
Expected # of years of life remaining	12.66	14.84	16.66	19.25
YLL	**0**	**0**	**183.26**	**77**
70–74	1	0	6	4
Expected # of years of life remaining	9.94	11.86	12.99	15.23
YLL	**9.94**	**0**	**77.94**	**60.92**
75-79	0	0	5	1
Expected # of years of life remaining	7.52	9.15	9.76	11.56
YLL	**0**	**0**	**48.8**	**11.56**
80–84	0	0	7	5
Expected # of years of life remaining	5.52	6.78	7.03	8.35
YLL	**0**	**0**	**49.21**	**41.75**
85+	0	0	6	1
Expected # of years of life remaining	2.94	3.41	3.49	3.92
YLL	**0**	**0**	**20.94**	**3.92**
Total YLL	**2106.05**	**1469.92**	**12115.45**	**4223.07**
YLD	**10.530**	**23.52**	**60.58**	**67.57**
DALY	**2116.58**	**1493.44**	**12176.03**	**4290.64**
DALY per suicide	**44.02**		**39.68**	