

Prioritizing policy interventions to improve diets? Will it work, can it happen, will it do harm?

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SUMMARY

Policies from non-health sectors have considerable impacts on the food environment and in turn on population nutrition. Health impact assessment (HIA) methods have been developed to identify the potential health effects of non-health policies; however, they are underused both within and outside the health sector. HIA and other assessment methods and tools can be used more extensively in health promotion to assist with the identification of the best policy options to pursue to improve and protect health. A

participatory process is presented in this paper which combines HIAs with feasibility and effectiveness assessments. The intention is to enable health promoters to more accurately identify which policy change options would be most likely to improve diets, considering both impact and likelihood of implementation. The process was successfully used in Fiji and Tonga and provided a more systematic way of understanding which policy interventions showed the most promise.

Key words: non-communicable diseases; food policy; health impact assessment; healthy public policy

BACKGROUND

It is not uncommon for policymakers to be confronted with multiple potential policy interventions to address a health problem. Faced with finite resources and competing interests, how can policymakers identify the policy intervention(s) that offers the most promise to protect and improve health? The conventional orthodoxy for making health policy is that the process should be informed by scientific evidence (National Health and Medical Research Council 1998). However, evidence of overall health benefits from a policy change is frequently not sufficient to secure political support and action. Health promoters are familiar with government inaction on health-promoting policies (Wise, 2001) on which a considerable

amount of time and resources has been invested. Policy change is complex, with policymakers' decisions influenced by many factors including politics, evidence, community advocacy and the media (Parsons, 1995; Sabatier and Jenkins-Smith, 1993). Within this context, the political science literature provides a theoretical foundation for helping inform policy-making practice.

The political science literature provides a number of theories to help predict and explain the policy-making process (Buse *et al.*, 2005; Parsons, 1995; Schlager, 1999). Some theories identify an integral role for evidence in a structured rational pathway (Bridgman and Davis, 2004; Osgood Field, 1987). Others place less emphasis on evidence and stress instead the role of political will to support change, the

current political agenda and the availability of constructive solutions (Richmond and Kotelchuck, 1991; Kingdon, 1984).

The political science sub-discipline of policy implementation has provided additional valuable theories for informing policy practice. Hill and Hupe categorize 'top-down' and 'bottom-up' theory frameworks (Hill and Hupe, 2002). Sabatier and Jenkins-Smith (Sabatier and Jenkins-Smith's, 1993) advocacy coalition framework places the emphasis for policy implementation on a 'bottom-up' process in which stakeholders with different interests form competing coalitions that vie to have their interests represented in policymaking. Mazmanian and Sabatier (Mazmanian and Sabatier, 1983) developed a policy implementation framework that represents policy implementation as occurring as a 'top-down' process. They identify three variables that affect the achievement of the policy objectives through the implementation process: the material variables associated with the problem being addressed; the structural dimensions that influence the implementation process and the net effect of a variety of contextual variables to support the policy.

What emerges from the political science literature is the need to consider the health impact, the feasibility and the effectiveness of policy options as a basis for undertaking assessments to prioritize policy options.

HEALTH IMPACT ASSESSMENTS

Health impact assessments (HIAs) can be used to develop an understanding of what the health effects of projects or policies might be (Lock, 2000; Krieger *et al.*, 2003). On the basis of the social model of health, HIAs consider the various effects of a policy or programme, and how these might impact on health (Cole and Fielding, 2007). A social model of health (Whitehead and Dahlgren, 1991) is based on the premise that health is not just the absence of disease, but also complete physical, mental and social well-being (World Health Organization, 1948). Health is therefore influenced by social, economic, cultural, environmental and political factors (World Health Organization, 1978), thus placing many of the determinants of health outside the domain of Government Health Departments (Mahoney and Durham, 2002; CSDH, 2008).

HIA has its origins in environmental impact assessment (Birley, 1995) and social impact assessment (Lock, 2000). Social impact assessments consider potential side effects on society. Generally, the distinction between social impact assessments and HIAs based on a social model is minimal (Kemmer, 2006). Similarly, sustainability assessments consider environmental, economic and social impacts (Voituriez *et al.*, 2006). Environmental impact assessments have also been modified to include elements of HIAs (Cole and Fielding, 2007), and so are similar to HIAs.

HIAs are mainly used prospectively to inform policymakers of any potential health side effects of planned policies and for informing decision-making about trade-offs between the various benefits and problems (Kemmer, 2006). This type of assessment is not intended to dictate policy choices, but to enable politicians to make decisions based on the best available information (Warren, 2000; Kemmer, 2006), and with some level of transparency (Carlos, 2001). HIAs can also be used to make adjustments to already agreed policies, but are rarely used within policy selection processes (Davenport *et al.*, 2006).

In this paper, we introduce an approach for using HIA as part of a process of choosing the most promising policy interventions to improve population nutrition in Fiji and Tonga from a range of possible options. We combine HIA with other participatory assessments, to ensure that the key factors of health, effectiveness and feasibility are considered when determining the most promising options. Building on the strengths of participatory HIA tools and approaches, a method has been developed that offers a way for HIA practitioners to extend the benefits of HIAs to selecting appropriate policy or programme interventions to recommend for action. The HIA emphasis on taking into account the relationship between all policy sectors and health makes HIAs ideal for this policy analysis process. In this paper, HIA is the impact assessment methodology used, as this research has an overall focus on improving health.

BUILDING ON HIAs TO IMPROVE DIETS—FEASIBILITY AND EFFECTIVENESS ASSESSMENTS

HIAs are most commonly used for assessing the unintended potential health effects of non-health

sector interventions (Lock, 2000). Today, policy environments are generally unsupportive of healthy eating (Battle and Brownell, 1996; Caraher and Coveney, 2003; WHO, 2000). This may be due, in part, to the insufficient use of measures/processes such as HIA during policy development. HIA is a relatively new process, and so did not exist when many of the policies and laws which are currently in use were developed. For example, assessments of European agricultural policies and subsidies have shown that they encourage overproduction of dairy fats and under availability of fruits and vegetables (Elinder, 2003; Lock *et al.*, 2003), which is counterproductive to healthy eating. Other policies, particularly in the areas of Trade and Finance, also significantly impact on food supply, cost and availability. There is therefore considerable potential for policy change outside of the health sector to be used to support healthier eating (Lang and Rayner, 2007; Lawrence, 2007). One challenge for health promoters is to select policy options which are likely to be successful in changing diets and health and that would be acceptable to policymakers in other sectors.

Acceptability of the proposed policy to non-health sectors would depend heavily on the existence and extent of negative or positive effects to those sectors. In drawing on a social model of health, HIA can be used to identify not only the health effects, but also the broader societal risks of a particular policy decision. For example, an HIA conducted on a policy proposal to increase tax on soft drinks would identify benefits such as increased revenue for the government, but should also identify risks such as the impact on local soft drink manufacturers of any reduced consumption. From a health perspective, this type of societal effect is relevant, as it may, for example, lead to increased unemployment, greater poverty and worse health. The financial and commerce effects identified by an HIA would be of direct interest to non-health government sectors such as Finance. Undertaking an HIA on a prospective policy, would enable more informed decision-making about whether the direct health gain outweighs any potential negative societal side effects. Additionally, if more direct positive outcomes for non-health sectors were identified, this information could be used to gain support for the policy. For example, if the reduction in soft drinks led to increased purchasing of locally made juices, this would benefit income for farmers and the local company.

With limited resources, health promoters must ensure that the interventions pursued are feasible (Canada School of Public Health, 2006; Gaziano *et al.*, 2007). Feasibility is the likelihood of a change being fully implemented, and relies on any action gaining the necessary political and public support, and having few opponents. By combining a feasibility assessment, with an assessment of both intended and unintended effects, the health promoter should be equipped with sufficient information to make a more informed decision about whether the policy change should be sought, either in its current form or with modifications. Similarly, if a number of options or alternatives exist, then a more informed decision can be made on which would be the most promising option. The need for a combined assessment of these broad areas has been recognized (Bots and Hulshof, 2000; Carter *et al.*, 2000; Swinburn *et al.*, 2005; Canada School of Public Health, 2006; World Bank, 2006; Stirling *et al.*, 2007) as being critical for prioritizing potential policy or project interventions. This is particularly relevant when working in non-health sectors with multiple stakeholders and non-health interests. However, guidance on practical processes to do it is lacking.

SETTING FOR RESEARCH

This paper is based on work undertaken as part of a multi-country study (Pacific Obesity Prevention in Communities Project) focused on obesity and non-communicable disease (NCDs) control. One component of the study was to undertake research to identify the 'most promising' policy interventions to improve the food environment in the Fiji Islands and the Kingdom of Tonga. The policy research had a participatory design, based around a multi-sectoral working group of stakeholders in each country. These stakeholders were policy advisers or senior experienced technical staff in their respective departments and agencies; both government and non-government. They were nominated by their respective ministries or agencies in response to formal requests from the Ministry of Health (the request included guidance on the level of nominee needed).

Being relatively small countries, policymakers and their advisers are relatively accessible to the community and are often also local business owners and are therefore heavily influenced by

community and business concerns. Policy-making processes vary considerably depending upon the issue; processes are influenced by evidence, neighbouring countries' and other international demands, values and community pressures. Most policy changes occur relatively rapidly and do not require a community consultation phase. The focus of this research was to ensure that the recommendations for policy change presented to policymakers represented the 'most promising' choices.

The entire research process involved three basic steps: identifying problem policies and gaps which contribute to the unhealthy food environment, identifying potential policy solutions and then assessing these solutions to identify a short-list of the most promising ones which would be recommended for implementation. Only the last step is reported in this paper, steps one and two are reported elsewhere (Snowdon *et al.*, 2008).

By the end of step two, Fiji's working group had identified over 100 policy options, and Tonga's group over 80, covering areas such as trade, taxation, urban planning, price control, marketing and also settings-based policies. For step three, a process was required which would facilitate the identification of the most promising options—those which were likely to succeed and to have impacts on population nutrition and NCDs. The process used would need to be implemented within 2–3 days workshop, due to limited availability of the working group members.

This research did not seek to analyse prior policy change, but instead assumed that policy-making can be heuristic in nature. The assumption is therefore that policymaking in these two countries can include consideration of evidence, but would also be influenced by policymakers' values and priorities (Bridgman and Davis, 2004); political will. Discussions in the early phases of this research with stakeholders, highlighted that policymaking in their sectors was heavily dependant on the support of the relevant Minister and other politicians. Policy advisers were however often responsible for providing information to Ministers on the relative merits of policies, including the cost involved and likely benefits. Stakeholders within the trade departments were responsible for ensuring compliance with trade agreements. Stakeholders did not however report having used HIAs or SIAs within policymaking.

The research includes analysis of: political and community acceptability, feasibility, cost, trade issues, equity and evidence. Assumptions are therefore made that a combination of these factors can be involved in future policymaking.

It is expected that this process will identify the policies which are most likely to succeed: to be implemented and to be effective. This paper reports on the method developed and outcomes. We describe the process we undertook for combining HIA with feasibility and effectiveness assessments to provide an evidence-based approach to assist policymakers to identify the one option from among multiple policy options that shows the most promise to improve and protect population health. We then tested the approach with policymakers to see if it would be useful to help inform the prioritizing stage of policy-making process.

METHODS

The methods for this research were developed with consideration of the time constraints previously mentioned, the multi-sectoral nature of the stakeholder group and the highly political nature of policy making. They were also designed to build the capacity of those involved, to enable this type of approach to be conducted on an on-going basis in-country. Assessments of the 80 options in Tonga and 100 in Fiji involved consideration of: effectiveness, potential side effects and feasibility. The processes used for these three areas are described below.

Effectiveness

Probable effectiveness could be modelled, but a lack of evidence (McQueen, 2001; Tang *et al.*, 2003) and local data would be a major problem for many of the policies and would also be time-consuming. An alternative to economic modelling, is to use informed stakeholder assessments of likely effectiveness (Stirling *et al.*, 2007; Swinburn *et al.*, 1999), guided by available evidence and data.

Logic models are commonly used, particularly in HIAs, to aid the prediction of unintended effects (Kemmm, 2006). The subjective theory is usually presented as a causal chain diagram (Rogers *et al.*, 2000) and includes alternative pathways of effect (Davies, 2003).

For this research, this approach was adopted to focus in more detail on the pathways for the intended effects on diets and NCDs. A simple scoring system was also included to identify those policies which were most likely to have a sizable effect on diets (Douglas *et al.*, 2001; Scott-Samuel *et al.*, 2001; International Health Impact Assessment Consortium, 2004).

- Likelihood of effect: DF, definite; P, probable or SP, speculative.
- Size of effect: ++, very positive effect/improves health; +, positive impact; 0, no impact; –, negative impact and --, very negative impact.

Potential side effects assessment

The assessment of potential side effects was based on HIA methods; this meant that the consideration of all potential societal effects was grounded within an understanding of a social model of health. This definition of health was clarified and discussed early on with the stakeholders to ensure their understanding (Cameron *et al.*, 2008).

Undertaking a full impact assessment can be quite time-consuming, and so would not have been feasible in this research. Alternative approaches include rapid HIAs (Ison, 2000), mini HIAs (Parry and Stevens, 2001) or in-depth screening assessment (Taylor *et al.*, 2003). These approaches are commonly used to identify interventions where more consideration or modification is needed (Davenport *et al.*, 2006) and would therefore be applicable to this research.

The limited time and lack of familiarity with HIAs (Douglas, 2003) by the stakeholders resulted in a decision to utilize a screening tool. A screening tool was developed derived from existing HIA tools (Lock, 2000; International Health Impact Assessment Consortium, 2004; Potter and Mahoney, 2006; Potter *et al.*, 2006) and adapted for the local situation. It focused on identifying areas where potential health impacts may originate (such as the economy or physical environment), and population sub-groups who might be particularly affected (such as rural, urban, poor, children). Identified impacts were scored for likelihood of occurrence, and probable size of the effect. The scoring used was similar to that for the effectiveness assessment.

- Likelihood of effect: DF, definite; P, probable or SP, speculative/possible/maybe.

- Size of effect: 1, very positive effect; 2, positive effect; 3, no effect; 4, negative effect; 5, very negative effect.

Feasibility

The key areas which affect policy or project feasibility have been highlighted by other authors (Bots and Hulshof, 2000; Carter *et al.*, 2000; Swinburn *et al.*, 2005; Canada School of Public Health, 2006; World Bank, 2006; Stirling *et al.*, 2007) and can be categorized as technical feasibility, cost feasibility, political acceptability, cultural acceptability and trade-related legal feasibility. Political feasibility would incorporate aspects of political will, the influence of community groups, regional and international issues. The likelihood of the policy proposal being fully and effectively implemented is difficult to predict given the general lack of transparency of policy-making processes. In developing countries, technical and cost feasibility may be particular problems, related to lack of expertise, infrastructure and equipment (Gericke *et al.*, 2005). Cultural acceptability is also critical as policymakers are susceptible to community advocacy regarding policy change. Fiji and Tonga have recently joined the World Trade Organization and are also signatories to other trade agreements, and this influences the policy options realistically available to countries (Lawrence, 2005; Clarke and McKenzie, 2007).

A feasibility assessment must therefore include consideration of these key issues. Although this could be done in a purely qualitative way (Haby *et al.*, 2006; Clarke and McKenzie, 2007), this can make comparison between policy options difficult. A scoring system was therefore developed along with a multi-criteria decision analysis (MCDA) step, to allow scores to be combined across categories. MCDA allows a number of issues to be considered simultaneously (Baltussen and Niessen, 2006) and ensures that undue emphasis is not placed on one aspect of the assessment when it may not be as influential (Bots and Hulshof, 2000) as other aspects. For example, while community acceptability is important, it is likely that this has less influence in policymaking than national economic concerns. It is not unusual for politicians to adopt unpopular policies ignoring community objections.

Definitions of these five issues were provided and discussed with stakeholders prior to their

use. Stakeholders were then asked to divide 100% points amongst these five issues (Wilson *et al.*, 2006) to provide a weighting system which would consider the varying importance of these issues to overall feasibility. This was based on the simple linear additive evaluation model (Baltussen and Niessen, 2006).

For each policy option, stakeholders were asked to provide scores for each of the five issues. A range of scores were available from one to four, where one was 'difficult or unacceptable' and four was 'easy'. Intentionally, there was no middle option available. The scores were then summed, using the weightings, for each policy option to give a single overall feasibility score.

All three assessments were guided by available evidence and local data. Following the process of completing all these assessments, the stakeholder group were asked to assign the policy options to one of three categories 'most promising', 'some promise but needs further consideration' or 'little promise'. No specific cut-offs for each category were provided to allow the stakeholders greater flexibility.

RESULTS AND DISCUSSION

The process of assessing the policy options in Fiji and Tonga was completed within the available time-frame of a two-day workshop, with clarification for missing values completed via email follow-up. The process was straightforward and there were minimal problems with implementation. Following the initial information on the process and some examples, the stakeholders were quickly able to complete the assessments. Some examples of the type of results are included in Tables 1–3.

The side effects assessment, while more time-consuming than the other two processes, did

identify a considerable number of both positive and negative potential side effects on non-health sectors. These findings led to many of the policy options being placed into the 'some promise' category, as it was felt they would need further investigation of the potential side effects to ensure that these were not significant or were easily mitigated. During this process, ways of mitigating side effects or maximizing benefits were also identified and documented. This was an added benefit of undertaking this assessment.

The assessment of effectiveness provided information on which policy options were most or least likely to be successful in changing diets and lowering NCD risk. Although most policy options were deemed likely to affect diets in some way, lack of evidence for benefits from a particular dietary change on NCD risk specifically, resulted in a number of policy options being assessed as ineffective. Using scientific evidence along with available local data is essential (Davenport *et al.*, 2006) to all three assessments.

The assessment of feasibility was valuable in identifying policy options which were least likely to be adopted and successfully implemented. For many this was related to lack of financial resources for implementation costs or insufficient technical resources which would hamper full implementation. The political and trade-related aspects were however weighted as being most important by the stakeholders, and a number of policy options were deemed unacceptable to politicians due to existing commitments, strategic plans or other factors. For example, the political acceptability of fast food outlet controls (Table 2) was deemed to be low, perhaps because many politicians are involved in these establishments in some way. Cultural acceptability was ranked as being the least influential in policy change feasibility. The assessment of

Table 1: Examples of effectiveness assessment

| Policy change option | Logic model | Likelihood of effect on NCDs | Strength of impact on NCDs |
|--|---|------------------------------|----------------------------|
| Remove import tariff from fruit | No tariff → ↓ price → ↑ sales → ↑ intake → ↓ NCD risk | DF | ++ |
| Add 5% import tariff to cooking oils | → ↑ Price of oils → ↓ consumption → ↓ fat intake → ↓ NCD risk, OR → ↑ price of oils → no change consumption | SP | + |
| Introduce limits on fast-food outlet development (according to density restrictions) | → ↓ Availability fast foods → ↓ purchasing fast foods → ↓ intake → ↓ NCD risk | P | + |

Table 2: Examples of feasibility assessment

| Policy change option | Technical feasibility | Cost feasibility | Political acceptability | Cultural/ community acceptability | Trade-related legality | Overall score |
|--|-----------------------|------------------|-------------------------|-----------------------------------|------------------------|---------------|
| Weightings assigned | 20% | 15% | 30% | 10% | 25% | |
| Remove import tariff from fruit | 4 | 4 | 3 | 4 | 4 | 3.6 |
| Add 5% import tariff to cooking oils | 4 | 4 | 3 | 2 | 4 | 3.5 |
| Introduce limits on fast-food outlet development | 3 | 4 | 2 | 2 | 4 | 3 |

Table 3: Example of side effects assessment results

| Policy change | Identified potential negative/positive side effects | Frequency of effect (who is affected) | Severity of impact (rank 1–5) (include ranks for different population groups) | Probability of effect | Evidence for this? | Possible actions to counteract negative effect |
|--|--|---------------------------------------|---|-----------------------|---|---|
| Remove import tariff from fruit | May reduce market for local produce | Local farmers | 4 | SP | Imports have been rising, no change in local sales | Only remove duty from fruits not grown locally Increase duty less healthy item |
| | Less government revenue | Government | 1 | DF | Tax data | |
| | May increase store sales and revenue | Stores and importers | 2 | P | Lower priced items sell well | |
| Add 5% import tariff to cooking oils | Increased price staple item | All | 4 (Poor 5) | P | Poor very price sensitive | Reduce duty healthier item |
| | May affect store sales and revenue | Stores and importers | 4 | P | | |
| | More government revenue | Government | 1 | DF | | |
| Introduce limits on fast-food outlet development | Less government revenue from taxes/licenses | Government | 4 | P | | Encourage more healthy food outlets |
| | Less jobs | Unskilled workers, urban | 4 | P | | |
| | Less competition, so higher prices affecting household budgets | All in urban areas | 4 | P | Fast-food is cheap currently, and affordable for many | |

weightings was almost the same in both countries, which suggests that this approach was a valid one. The process evaluated well, although it was suggested that a separate category might be needed for private sector acceptability,

particularly local businesses, as their views were ‘lost’ in the community/cultural acceptability category. Developing one overall score for feasibility ensured that stakeholders were not unduly influenced by just one aspect.

Following the scoring and assessment of side effects, feasibility and effectiveness, stakeholders were requested to assign each policy option into one of three categories. This was guided by the assessments undertaken. Both countries assigned around one-third of the policy options in the 'most promising' group. There was broad consensus in all areas except for 2–3 policy options which were subsequently placed into the 'some promise' category, for further assessment and consultation. The in-depth discussion of each policy option identified 2–3 policy options, in each country, which were considered to be highly important, but had significant problem areas either of feasibility or negative side effects. It was agreed that despite the anticipated difficulties, the policy options should still be recommended. Complementary actions were suggested to mitigate negative impacts. For options with low feasibility, it was recognized that additional effort would be required to facilitate implementation. This flexibility in the categorization of policy options allowed stakeholders to include important policies even if their implementation was likely to be difficult.

The process presented in this paper, draws on the strengths of participatory processes and HIAs (Lobstein, 2006), and was quick to implement with minimal training or technical support required. Evaluations by the stakeholders were positive, with subsequent requests for copies of tools used to enable their use elsewhere.

There are a number of limitations to the process, mainly around its participatory design. Only the views of the members of a single stakeholder group in each country were elicited in this research. One concern with this is whether their views accurately reflected those of the wider public and of politicians (Baltussen *et al.*, 2006). Policymakers' values may also differ from those anticipated by the stakeholders. It would therefore be advisable to repeat this same process with a number of other stakeholder groups and with key policymakers directly, in order to ascertain wider views. Diets, health and politics are all undergoing constant change and the processes should therefore be repeated regularly.

HIAs themselves have also been criticized, in part because of variable methodology, poor design (Petticrew *et al.*, 2007) and insufficient use of published literature (Thomson, 2008). The predictive value of HIAs can be poor (Parry and Stevens, 2001), although this is

partly due to difficulties with predicting any future events whether through participatory processes (Petticrew *et al.*, 2007; Veerman *et al.*, 2007) or through expert consultation (Murray and Frenk, 2008). Evaluating their predictive value is also difficult (Wismar, 2004), although evaluation regarding the impact of the HIA on decision-making is simpler and suggests that HIAs have an impact (Quigley and Taylor, 2003; Wismar, 2004; Wismar *et al.*, 2007) and are useful tools in supporting decision-making (Wismar *et al.*, 2007).

The accuracy of all the assessments in terms of their translation into policy practice is unknown, as there are no data with which to compare them. In the future, a research priority will be to follow-up the process and outcomes presented here and evaluate if and how they were applied in practice. For the assessment of effectiveness, economic modelling of some of the policies could also be undertaken, and this is planned. This will enable some comparison of the results of the modelling and participatory assessments of effectiveness. Any policies implemented could be evaluated later, however changing factors elsewhere would limit the benefit of this. For all three parts of the assessment, uncertainties involved would need to be communicated (Kemmer, 2006) to other policy advisers not involved in the process.

The complexities of policy-making processes present particular challenges for this type of research. In these two countries, there is little documented information on how policy change occurs, and the factors involved. Early advice was sought from the stakeholder group members regarding the relevance of the suggested approach, and they considered the issues to be assessed as appropriate and relevant. It is likely that policy change does occur with complete disregard for the evidence and solely based on a politician's whim, as it is in other countries. This type of policymaking is not however the norm. There is however the potential for policymaking to occur in a more informed way, considering possible options and their merits (Bridgman and Davis, 2004). Some of the policy recommendations may be unsuccessful if that issue becomes more politicized. Policy change may also be considerably delayed due to factors such as insufficient capacity or resources, political or community reticence and extended consultation processes. With delay comes an increasing risk that the situation

locally and globally will have changed, which in turn may make some of the assessments obsolete.

Utilizing policy-making theory is critical when seeking to modify the policy environment and aid in the process of assessing policy interventions. The process and outcomes presented here highlight the contextual role of social, economic, environmental and political factors in influencing policymaking. These factors help to determine the feasibility and effectiveness of various policy interventions. These findings are consistent with agenda setting (Richmond and Kotelchuck, 1991; Kingdon, 1984) and policy implementation (Mazmanian and Sabatier, 1983) theories. A challenge with prioritizing policy interventions is that it cannot be assumed that political science theories will apply equally in different situations and for different issues. Nevertheless, our research demonstrates the relevance of agenda setting and policy implementation theories in developing country settings.

CONCLUSION

The process of using HIA with feasibility and effectiveness assessment enabled a more comprehensive assessment of the advantages and disadvantages of different policy options. This relatively straightforward participatory process was of benefit in supporting more informed and transparent decision-making process by the stakeholder groups in both countries. Inevitably trade-offs will be made between key factors such as effectiveness, cost and local economic impacts (Warren, 2000), but this should be done based on careful consideration. Using consistent methods to assess the range of available policies is likely to increase the value of the process to policymakers (Davenport *et al.*, 2006).

The results showed that by using these three processes together that the poor options could be weeded out, good options highlighted and areas for further in-depth consideration identified. The process would be easily adaptable to other situations, issues and to health promotion intervention project and programme planning. Specific criteria under assessment could also be modified within the side effects and feasibility assessment to tailor the tools to locations or issues.

Health promoters must be selective and targeted in their advocacy for policy change, particularly in areas outside of the health sector

domain. Non-health sectors are more likely to implement policy changes which are of benefit to their objectives, and the process presented in this paper can help in identifying these benefits. In combination with feasibility and effectiveness assessments, HIAs can facilitate more informed decision-making by policymakers. HIAs should be used more by health promoters when recommending policy changes outside of the health sector, preferably combined with effectiveness and feasibility assessments.

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