Challenges of Building Health Impact Assessment Capacity in Developing Countries: a Review

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Abstract

The published and grey literatures, including online technical reports and guidelines, about Health Impact Assessment (HIA) capacity building and training are reviewed. The review aims to compare country-specific HIA environments and different training materials and to identify appropriate training material for HIA in low- and middle-income (LMIC) settings, such as Mongolia. The few publications about HIA and capacity building found in scientific databases either describe the potential benefits of HIA training or discuss methodological issues. There is, however, a large body of grey literature, mostly institutional, available online. In assessing the HIA training literature, three key points arise: knowing the audiences' roles when determining training design and content, being culturally sensitive and recognizing traditional knowledge in training and promoting elements of "system-wide capacity building" for HIA. There remains a need to increase the available literature and web content on HIA training and capacity building specifically designed for LMICs. Decisions will have to be made about what to translate and how to translate training materials into languages other than English.

Introduction

Although the term health impact assessment (HIA) first appeared in international literature in 1995,[1] HIA is still a developing field. Most broadly, it is a process for identifying and considering the potential and sometimes actual health impacts of a proposal or policy on a population. The primary output of most HIAs is a set of evidence-based recommendations geared towards informing the decision-making process. These recommendations are often practical ways to enhance the positive aspects of a proposal and to remove or minimize any negative impacts on health, well-being and health inequalities that may arise or already exist.[2] In the past, formal evaluations that assessed the impact of a proposal or policy were for economic, environmental, political and social reasons, with health only being a recent addition.

The necessity of conducting HIAs as well as addressing whether or not HIAs are worthwhile cannot be explained by simply providing quantitative data since HIAs' benefits and impacts are largely qualitative and may differ from case to case. Economic analysis seeks to quantify the costs and benefits of HIAs in order to ensure that the resources involved in an HIA are effectively deployed to achieve maximum health benefits. Such analyses allow HIAs to be compared with other interventions that are also aimed at improving health to ensure the best use of available resources. However, there are many challenges in quantifying the benefits of an HIA because many of the impacts identified may be difficult to measure, such as improved relationships.[3] Alternatively, cost–utility analysis could be used to quantify the benefits of HIA, whereby the benefits can be identified without having to be translated into monetary terms.[4] Potential challenges arise because resources for HIA are often drawn from existing budgets rather than being specifically allocated. These challenges and limitations in quantifying HIA benefits are reflected in the practical world, too. For instance, only 15 out of 158 HIAs that were conducted throughout Europe in 2006 contained cost information.[3] Predicting important impacts may often involve weaker and more speculative evidence,[5] but this information can still inform the decision-making process and serve as a foundation for many later quantitative evidence analyses.

International experience suggests that there exist six key factors necessary for the successful application of HIAs.[6] These include:

1. Intersectoral communication and collaboration
2. Comprehensive stakeholder participation
3. Scientific and conditional scoping
4. Use of a holistic concept of health for HIA practitioners
5. Emphasis on both positive and negative outcomes
6. Adequate HIA process training

The most common reasons for the absence or low quality of HIAs include lack of expertise, resources, available baseline data, time, coordination and standardized methodology. Of all of these, the lack of expert level capacity to carry out an HIA is thought to be the primary cause of HIA failure.[7] Therefore, building capacity to properly carry out HIAs should be the first priority in order to minimize the failure of HIA practices. Capacity building is a broad, lengthy and continuous process that affects those who order, conduct, monitor and implement HIAs differently depending on the desired competency. It largely starts with increasing awareness of HIAs' importance, thereby building knowledge and skills before introducing the possible complexity of real life examples. Capacity building efforts should continue with a focus on ways to maintain built capacity in order to keep HIAs sustainable. While HIAs' capacity for multisectoral stakeholders is of prime concern, some authors indicate that building public health professionals' capacity first, or even concurrently, is more essential since they would have prerequisite knowledge allowing them to learn HIAs' aspects successfully.[8] The lack of HIA-trained professionals is a major barrier for the implementation of HIAs.[9] Training a group of public health practitioners in HIA methodology in the initial stage has been shown to help provide leadership to others as they undertake the implementation of HIA projects.[8]

Methodology

A systematic literature search was conducted by using three major health research databases, namely Elsevier, PubMed and Science Direct. "HIA" or "health impact assessment" was searched along with the following key words: capacity building, training, module, manual and competency. "HIA in countries" was searched specifically to capture documents that may pertain to HIA use in different countries. After scanning titles, abstracts and at times full articles, we collected all examples of HIA training materials as well as documents written about HIA training or capacity building. This review incorporates both peer-reviewed and grey literature. Despite growing interest in HIAs in peer-reviewed papers, it seems that most of the HIA literature is non-standard, grey literature, including various online reports created primarily in response to emerging practical needs and interactive training purposes. A Google search for "health impact assessment capacity building" in October 2011 resulted in 5,350 hits in the English language. HIA-gateway websites that belonged to the World Health Organization's HIA collaborating centers and other institutions that focus on HIA capacity building were searched and analyzed.

The database generated 104 HIA documents. Reference lists for all included documents were scanned for related articles, and 52 additional documents were collected using this snowballing technique. In addition, other papers were identified through communications with experts or researchers in the field. The total amassed literature includes 156 documents, out of which 112 are grey, 45 are peer-reviewed articles and only three articles discuss HIAs in LMICs contexts. A total of 39 peer-reviewed articles and 12 grey materials were chosen to be included in this review paper as their contents were most relevant to the objective of the review.

Findings

Global HIA Capacity Building Efforts

Although HIA has been encouraged in most areas of the world,[10] it is only standard or mandatory in New Zealand, Thailand, South Korea and the European Union.[11] Countries such as Canada, the United Kingdom (UK), Australia and the United States of America (USA) are gaining ground in terms of building systems that refine HIA methodology, support capacity building and promote informed decision making without a mandated legislative requirement at the national level. Countries vary in how capacity is monitored, and many rely on expert and independent reviews to ensure that HIAs are being conducted according to international standards. The literature was summarized and divided into issues and examples from select high-income country settings and select LMIC settings given the differences in HIA capacities and resources to carry out HIAs between the two contexts.

Countries such as Canada, the UK and Australia were selected as illustrative examples of how HIAs can be successfully promoted by academic and professional institutions without government mandates. Conversely, the HIA experience in Thailand is discussed as the best practice that successfully streamlined HIA-related regulations into all respective laws and acts with strict enforcement by the national government. Mongolia's ambitious efforts to adopt an HIA system that combines both legalization and institutionalization aspects is also discussed. In addition to the rationale of why specific countries were chosen, the majority of the literature that discusses HIA theory, methodology and practices were either conducted in the abovementioned countries or written by authors from these countries. In general, literature pertaining to HIA and HIA capacity building within LMICs is very limited. The current systems used in LMICs are primarily focused on the physical, environmental determinants of health and hence are limited in their assessment of the breadth of population health determinants.

Canada: Within Canada, a minister at the provincial or territorial level makes decisions about whether or not a project, program or policy proceeds upon the completion of Environmental Impact Assessment (EIA) or HIA. The province of British Columbia, one of the early innovators in HIA, largely abandoned its efforts to institutionalize assessments following a change in government in the late 1990s. In contrast, HIA seems to be well incorporated in government decision making and planning in Quebec.[12] As shown in this province, the empowerment of local communities, capacity building and the promotion of cross-cultural understanding could be an essential part of health services.[13] There is a need to further explore how the health and educational needs of Aboriginal people in Canada might be met more comprehensively.[14]

United Kingdom: The value of HIA has increasingly been recognized in the UK over the last decade. In the past six years, both regional and national initiatives have encouraged HIA as part of planning and policymaking.[15] At a national level, despite the fact that there is no statutory requirement to undertake HIA, there is recognition within the United Kingdom of the value of HIA as a resource to support efforts to improve health and, particularly, to address health inequalities. The government has clearly signaled its acknowledgement of the importance of the wider determinants of health and its commitment to promoting HIA at a policy level. A number of specialist centers are emerging in the United Kingdom to support the growing interest in HIA.[15]

Australia: Since the early 1990s, HIA activity in Australia has increased and diversified in application and practice. At the same time, Australia has become a world leader in considering equity within HIA. The states of Tasmania and Victoria have incorporated and legislated HIA into EIA. In the rest of the states and territories, HIA is being increasingly recognized and accepted by policy makers, private industry and other sectors as a tool to ensure that new initiatives protect and sustain health and well-being whilst ensuring economic development and prosperity. Perhaps the largest lesson from current HIA practices in Australia is that HIA will only flourish in terms of methodological depth and its ability to influence proposal development when it is supported by systems with the capacity to undertake HIA effectively.[16]

The empowerment of local communities, capacity building and the promotion of cross-cultural understanding could be an essential part of health services.

Thailand: Institutionalization and capacity building for HIA in Thailand can be seen as an international best practice within LMICs. The provision concerning HIA is stated in two laws, namely the Constitution of the Royal Kingdom of Thailand B.E.2550 and the National Health Act B.E.2550, both of which require mandatory HIA prior to launch of every mining project. Moreover, any project or activity that may cause severe impacts on a community is required to perform HIA before it can proceed. The Department of Health instituted HIA as part of the department's development strategies between 2008 and 2011 with three objectives: 1) developing an HIA system, 2) building the capacity of local communities for HIA implementation and 3) setting up a community-based environmental and health surveillance system. Countries that support the idea of making HIA mandatory strive to adopt Thailand's example since the regulatory framework in Thailand explicitly lays out the ways to implement, enforce and monitor HIAs.

Mongolia: Mongolia's growing economy and emerging mining industry require the country to be better prepared for the potential negative social impacts they could bring. According to the World Bank, Mongolia became the country with the world's fastest growing economy in 2011 with a 17.3% growth rate.[17,18] Insurgence of the mining industry and increased need for HIAs coincide in Mongolia. Although HIA is still a fairly new and developing approach in Mon-

golia, there is evidence of variable but increasing HIA activity at both the regional and local levels. Following the recommendation of the East Asian Ministerial Conference in 2010, a multisectoral working group for HIA was created with the joint consultation of the Ministry of Health and the Ministry of Nature and Environment in February 2011. The need to build and maintain the HIA capacity was identified as a top priority item in this ongoing strategy development process. The latest improvement in the HIA advocacy effort was the inclusion of health concepts in the amendment of environmental impact assessment law and the signing of a Memoranda of Understanding (MoU) between the Ministries of Health and Environment.

HIA Training Materials

One of the aims of this review is to identify and compare different HIA training materials with the specific aim of identifying appropriate training materials for HIA in LMIC settings. The limited number of institutionalized training courses and their commercial purpose make it very challenging to obtain such material free of charge. However, of the few available training manuals and modules, University of California at Los Angeles (UCLA)'s HIA Clearinghouse, University of Birmingham's HIA training center and Health Scotland's e-learning course materials seemed most useful. WHO HIA collaborating centers such as University of Birmingham, University of Liverpool's IMPACT and UCLA HIA training centers are proven leaders in HIA training and regularly offer well-established HIA training. These training manuals were identified as examples of the best international practices. There are several different forms of HIA training, which include short courses, workshops, university level training and e-learning courses. These can all be taught at introductory or advanced levels. HIA competency can vary depending on the position, intention and involvement of particular players. Although HIA requires all stakeholders' participation throughout its stages, the roles, capacity level and involvement of parties differ depending on whether a person is a beneficiary or a benefactor. For this reason, the oil and gas company Shell has developed a model that distinguishes different levels of capacity. In the Shell model, there are four levels of competency defined as "awareness," "knowledge," "skilled" and "mastery."[19] This knowledge hierarchy model may be helpful in deciding different parties' roles and responsibilities in HIA, satisfactory levels of competency and the specific training content. However, it is still not clear how to evaluate one's level of competency.

> Although HIA has been encouraged in most areas of the world, it still has not become standard or mandatory anywhere except New Zealand, Thailand, South Korea and the European Union.

Discussion

HIA still has not become standard or mandatory in most areas of the world, with the exceptions of New Zealand, Thailand, South Korea and the European Union.[11] Only a few countries—Canada, the USA, the UK and Australia—seem to be succeeding in building a strong supportive environment, building international and national HIA capacity and strengthening HIA methodology, even though HIA is not mandatory in these countries.[10] So far, HIA has largely been undertaken by enthusiasts with varying levels of experience usually working in public health departments or local authorities,[7] or in other words, those who have found the necessary resources from within their own organizations to advocate for and undertake HIA. Clearly, this is not a sustainable pattern.

Currently there are two types of HIA capacity building: the social determinants/health oriented training aimed primarily at environmental impact consultants and the methodological training designed largely for public health professionals. Capacity in the evaluation of HIA activities is required in addition to capacities in conducting assessments. Greater efforts to assist in training and capacity building of health professionals in LMICs are necessary in order to reduce the reliance on outside HIA/EIA experts and consultants.[7] Building local capacity and an institutionalized training system could bring necessary country ownership in HIA. Country ownership could increase acceptance, transparency, literacy and efficiency of HIA at national levels. HIA training is not meant for experts only. Everybody, including decision makers, policy planners, executives, media representatives, local government officials and community representatives can benefit from effective HIA training. It is believed that planners and decision makers would be more likely to request and use HIA processes if trained to understand their value. Strengthening the capacity of countries in HIA will likely take place in the context of already existing frameworks of environmental impact assessment.[20] Capacity building efforts for HIA must be comprehensive, addressing a number of essential elements at different levels in a coordinated manner. Some of the suggested initiatives include the creation of a supportive policy environment, the establishment of a strategic alliance between environment and health ministries, the development of skills in intersectoral negotiation and decision-making and the strengthening of the Ministry of Health's capacity to adequately respond to the needs of other development sectors.[19] Out of these, MoU is likely the most effective element as it could establish strategic alliances between environmental and health ministries. In Mongolia's case, MoU also serves as a tool to implement HIA policy more sustainably.

Limitations

When considering the implications of this review, a number of limitations must be acknowledged. We have found very few peer reviewed articles on HIA capacity building, and, although numerous, the grey literature related to HIA capacity building has not necessarily undergone critical assessment. We did not include environmental or social impact assessment in our searches. There may be overlap related to capacity development in some areas between HIA and EIA or SIA. Finally, our communications with expert sources was limited, and we assume that over time more resources and articles will become evident to us in a wider process of referral.

Recommendations

This review has important implications for LMICs. We have identified the following key recommendations for those wishing to explore possibilities for HIA capacity building, specifically in LMICs:

1. HIA developers should consider the value of "cultural sensitivity" and the Canadian Indigenous community's best practice when developing training content in settings with aboriginal, minority or other vulnerable, affected populations. Multisectoral working groups need to identify and reach consensus on "contextually appropriate" training content for LMICs.

2. There is a need to build a "supportive system," which could be carried out by implementing the following three elements: a) developing strong political and governmental support for HIA, b) having validated instruments and c) equipping the workforce with the skills and knowledge for HIAs.

3. Overall, there is a need to institutionalize HIA training in order for it to be sustainable. High-income countries could assist in the training and capacity building of health professionals within LMICs, but this should be done with appropriate partnership and leadership from the LMIC partner in order to break any cycle of dependency that might result on outside HIA/EIA experts or consultants.

Conclusion

This review examined peer-reviewed and grey literature available

on HIA capacity building and training. The review aimed to compare country-specific environments and different HIA training materials as well as to identify appropriate training material for HIA that can be employed in LMIC settings. Searches of scientific databases resulted in few items about HIA and capacity building specifically. What was found either described the potential benefits of HIA training or discussed methodological issues. A number of key HIA training materials that cover the basics of HIA methods have been identified and could be revised to incorporate examples from local contexts to make them contextually appropriate and useable in the LMIC contexts. In addition, there are many training materials and modules that are not accessible to interested parties due to the commercial purpose of highly regarded HIA training agencies. Currently, there is no obvious example of a best practice document or approach for HIA capacity building in these settings, although Thailand has provided some leadership in this regard.

There are underlying questions that remain: How will we increase adequate literature and web content on HIA training and capacity building specifically designed for LMICs? And, in the long term, how and what parts of the materials identified in this review could be adopted and translated for use in these settings?

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