Practitioner opinions on health promotion interventions that work: Opening the ‘black box’ of a linear evidence-based approach

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ABSTRACT

While attempts are being made to improve health promotion by following a linear Evidence-Based (EB) approach, the actors involved are aware that the quality of health promotion is not just a matter of supplying ‘evidence-based’ interventions to local practitioners, but the result of a situated coproduction process that depends on many factors. This paper explores what constitutes an intervention that works from the perspective of health promotion professionals (HPP), and how, according to them, the design and implementation of interventions should be improved. We interviewed 81 HPPs about the use of 10 health promotion interventions at 30 Municipality Health Services in The Netherlands. The HPPs described an intervention that works as something that produces its intended effects after being realized in a local situation. Interventions are realized by combining elements of a supplied intervention (e.g. a theory, artefacts) with elements that are situated in the local context (e.g. funding, local network). Interventions that are transferred contain implicit assumptions about local contexts, but it is often unclear what precisely constitutes an intervention and what is assumed of local contexts. An intervention that works is a situated configuration of aligned elements. A linear EB approach depends on the realization of the local circumstances in which ‘evidence based’ interventions can work. Various strategies are possible for approximating such circumstances, but the core assumption that the configuration that is realized in practice is similar to the ‘evidence based’ intervention seems unrealistic for most health promotion in the Netherlands. Under such circumstances, attention should shift from central quality assurance to the system of actors and the distributed actions and heterogeneous learning processes that together add up to interventions that work.

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Introduction

During the past decade, attempts to improve health promotion have embraced a linear Evidence-Based (EB) approach (Brug et al., 2010; Cohen et al., 2008; Estabrooks & Glasgow, 2006; Green & Glasgow, 2006; Kelly et al., 2010). The essence of a linear EB approach is to first determine the effectiveness of interventions and consequently promote their use in practice. We have added the term linear to emphasize that this approach is only one of the possible approaches to the use of evidence in practice. A linear approach assumes, implicitly, that interventions are fixed entities that can be moved around while staying the same, and depicts the
since its inception that to achieve successful health promotion, it is not enough to just supply ‘effective’ interventions to local practitioners. Interventions that work are realized in practice by health promotion professionals (HPP) who combine elements of a supplied intervention with elements that are situated in the local context (e.g. network of intermediaries, funding, competences of HPPs) (Estabrooks & Glasgow, 2006; Green, Glasgow, Atkins, & Stange, 2009; Kelly et al., 2010). The actions (e.g. designing, learning by testing and doing) that lead to an intervention that works are thus distributed among different actors and the intervention that is ultimately realized in practice is a situated co-production. These insights raise questions that are important for the central quality assurance that lies at the core of a linear EB approach. What actually constitutes the configuration that we refer to as ‘intervention’? How does the ‘intervention’ that is designed and researched at a distance, and centrally recognized as effective, relate to what is later supplied to practitioners and to what is ultimately realized in local practice? The answers to these questions are essential for organizations like the CGL that are charged with the task of developing a central quality assurance structure (Abraham, Kelly, West, & Michie, 2009; Brug et al., 2010; Dubois et al., 2008; Kelly et al., 2009). This central quality assurance is not neo-technocratic, but part of a strategy aimed at contributing to improvement in local practice. A good understanding of what is going on in local practice is essential in finding the best approach to quality assurance and improvement. Though much has been written about how effective interventions should be developed, much less is known about the perspective of HPPs who attempt to make interventions work in practice. The perspective of HPPs is important because these actors play a key role in making interventions work. The aim of this study is to explore what constitutes an intervention that works from the perspective of HPPs, and how, according to them, the development and implementation of interventions should be improved. We explored these questions from a pragmatic perspective, using a case study research design. These issues have a much wider currency than health promotion in the Netherlands. The idea of improving public goods and services, such as health and social services, through central structures for quality assurance has international interest (Berwick, 2005; Kelly et al., 2010). Lessons about how such an approach functions and can be optimized are relevant to all those charged with taking forward an ‘evidence-based’ improvement agenda.

**Center for Healthy Living in the health promotion system**

The health promotion system in the Netherlands consists of several organizations at the national and local level. The Public Health Act of 2008 formally assigns the primary responsibility of executing collective prevention to the local municipal governments. Collective prevention should encompass: creating insight into the health status of the population, drafting a local health policy strategy (every 4 years), safeguarding health aspects in policy decisions and contributing to setting up, executing and coordinating prevention programs, including health promotion. By law, every municipality is required to contract the Municipal Health Service (MHS) in their region. Since the decentralization in 2004, the municipalities have full policy freedom in determining the priorities, resource allocation and precise organization of health promotion. There are great differences between the 30 MHSs with respect to the set priorities, the way health promotion is organized, the funding received, the collaboration with local and national organizations and the health promotion activities conducted. This diversity is exemplified by the large difference in the available capacity for health promotion per MHS and the number of citizens for which an MHS works (see Fig. 1). The number of citizens per HPP varies among MHSs from 22,000 to 380,000.

At the national level, the Ministry of Health (MoH) sets broad national priorities and provides task-specific funding for 10 Health Promotion Theme Institutes (TI) that work for specific themes, such as consumer safety, tobacco control and HIV/AIDS prevention (see Table 1, left column). The TIs work at the national level and organize national campaigns, advise the MoH, develop and supply interventions, conduct applied research and support local health promotion efforts. Besides these formal TIs, there are various national organizations, such as the Asthma Fund (Asthma fonds), the Heart Foundation (Hartstichting) and the Foundation for Alcohol Prevention (STAP), that are engaged in health promotion. The Health Care Inspectorate (IGZ) promotes public health through the inspection and enforcement of the quality of prevention measures. In the past, IGZ has reported that health promotion in the Netherlands functioned below expectations. At the request of the MoH, the Center for Healthy Living (CGL) was therefore set up to support health promotion in the Netherlands. One of the core tasks of the CGL has been to develop and manage a quality assurance structure that independently determines which of the developed and supplied interventions are the most ‘effective’ (Brug et al., 2010). The CGL promotes the use of these recognized interventions instead of locally created or other interventions. The IGZ biannually inspects the MHSs and has stated that it will determine the quality of their functioning by assessing the extent to which interventions that are recognized as ‘effective’ by the CGL are implemented. This study is part of a larger project funded by the Strategic Research Fund (SOR) of the Dutch National Institute for Public Health and the Environment (RIVM) and placed at the VU University to assure independence.

**Methods**

**Study population**

For this study, we conducted interviews and read research reports and policy documents of the CGL, the RIVM and the MoH related to health promotion in the Netherlands. Between May 2008 and June 2009, all 30 MHSs in the Netherlands were approached for voluntary interviews with the professionals involved in health promotion (two merging MHSs were counted as one).

**Interview guide development and the interviewing process**

Inspired by work of others, a semi-structured interview guide was developed in two steps (Estabrooks & Glasgow, 2006). First, a draft version was collectively designed and discussed in a working group at CGL with staff from a variety of local and national...
The ten Theme Institutes and the suggested interventions.

<table>
<thead>
<tr>
<th>Theme Institute</th>
<th>The interventions</th>
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<tbody>
<tr>
<td>NIGZ</td>
<td>Go for healthy! An agenda setting annual national campaign for primary schools (5–12 y). The aims are to put health and safety promotion on the agenda of schools, be an umbrella for health promotion programmes and stimulate the introduction of the health promoting method. Go for healthy! Starts with a test for children, teachers and their parents after which schools can use their own, or provided materials, and downloadable lessons to promote health. Schools are assisted in finding organizations that can support them.</td>
</tr>
<tr>
<td>Pharos</td>
<td>Wiser in love Handbook for providing sexual education to asylum seekers and migrants. Comprises of a 9 lesson curriculum for sexual education for youthful asylum seekers and migrants that can be used in asylum seekers centers, and at schools for asylum seekers. Themes vary from introduction to sexuality, sexual development, diversity, prostitution and love boys, STI’s, birth control, friendship and relations and female circumcision.</td>
</tr>
<tr>
<td>NISB</td>
<td>Communities on the move A community based intervention method, oriented towards inactive citizens with a low SES. The method aims to assist professionals to employ participation and empowerment as strategies for bottom up health promotion and aims to achieve intersectoral collaboration and structural embedding. The aim is that participants are structurally physically active by being more active in daily life and by knowing more about a healthy and active lifestyle.</td>
</tr>
<tr>
<td>Rutgers Nisso group</td>
<td>Spring fever week A 5 lesson curriculum programme with age specific lessons for 5–12 year olds in which, during an annually organized week, a daily lesson is provided at primary schools about relational and sexual development. Nationally organized activities aim to raise awareness in the designated week. The lessons can also be employable at other times during the year.</td>
</tr>
<tr>
<td>Schorer stichting</td>
<td>Keep it safe A package of modules for facilitators and organizers of youth groups with instructions, information, methods and materials for organizing and having meetings about sexual health, safe sex, STI's and HIV. In addition to the package, advice and support is offered.</td>
</tr>
<tr>
<td>STI AIDS Netherlands</td>
<td>Long live love Comprises of 6 lessons aimed at helping high school students learn to talk and negotiate about relations and safe sex, using condoms and anti conception. It is accompanied with an information brochure, a handbook for teachers and a video with 5 lessons. It is especially meant for multicultural, preparatory vocational school students and teachers.</td>
</tr>
<tr>
<td>Consumer and safety foundation</td>
<td>Stop, you are falling! A method to prevent falling, aims at intermediary parties. There are various handbooks (homecare, elderly care, local government and for municipality health authorities) to assist local organizations with organizing and executing fall prevention activities. Workshops are organized for exchanging experiences and tips for implementing of fall prevention activities and tips for recruiting colleagues and collaboration partners keeping them enthusiastic.</td>
</tr>
<tr>
<td>Stivoro</td>
<td>24-h-not smoking-action A multi method campaign that challenges smokers to stop smoking for 24 h. Participants can share their experiences online and receive personalized feedback about the information of non smoking, tips and advice to become a non smoker. Municipality health services promote the campaign at the local level by spreading flyers and posters while at a national level campaign comprises of radio, outdoor and online advertisement.</td>
</tr>
<tr>
<td>Trimbos institute</td>
<td>The healthy school and stimulants A multi component prevention programme about alcohol, smoking and drugs. It comprises of: educational lessons, engaging parents, setting rules for stimulants, signaling and supporting students who show (problematic) use of stimulants. Schools can receive support for the programme from an MHS or local addiction treatment center.</td>
</tr>
<tr>
<td>The Nutrition Centre</td>
<td>The ‘Healthy School Canteen’ project aims to promote healthy food products in school canteens by introducing hygiene standards, offering advice about healthy choices, addressing students’ choices in the canteen and introducing school policies. The campaign is directed at all types of schools and concerns teachers, students, canteen employees and parents. The educational part focuses specifically on the age 12–16.</td>
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The interviews started with mostly closed questions concerning the basic characteristics of the MHS and open questions about the views of the HPPs on how health promotion, the process of developing and implementing interventions and the collaboration between the actors involved could be improved. This was followed by asking the HPPs open questions about what, in their opinion, organizations related to health promotion. Each of the ten TIs was asked to suggest one of their most used interventions (see Table 1, right column). These ten interventions were used as case material for the interviews with the MHSs. The second step was to pilot the interview guide at two MHSs, after which the order of the questions was changed and a final interview protocol was established.

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constituted an intervention that works. We encouraged HPPs to elaborate on this and give examples. The interviews continued with a discussion of the various processes around each TI intervention (e.g. contacts with TI, supplying, adopting, adaptation and implementation of interventions). We explored how the collaboration between national and local organizations around interventions could be improved, and which health themes and target groups required more or less attention. The interviews concluded with cross-cutting questions that addressed particular themes or required more or less attention. The interviews concluded with themes and target groups which could be improved, and which health themes and target groups between national and local organizations around interventions could be improved.

Data analysis

The research reports and policy documents were read and used to describe the formal structure and role of the CGL in the health promotion system. A detailed summary of each interview was prepared by one of the interviewers and a data management assistant using both the audio-tapes and notes taken during the interviews. The detailed summaries were organized according to question and TI intervention. Three of the four interviewers and a data management assistant were involved in data analyses. Data were analyzed manually by coding statements from the interviews according to topic and by counting categorical responses where possible. This was first done separately by the researchers involved, after which the coding and emerging themes were discussed. Summaries were made for each topic and each TI intervention by going through the summarized interviews and identifying themes using a constant comparative method of analysis (Pope, Ziebland, & Mays, 2000). Theme and TI intervention-specific summaries were then developed (Braun & Clarke, 2006).

This study did not require ethics approval according to current Dutch law. Verbal consent to participate in the interviews was obtained. Care has been taken to ensure that no comments can be traced back to an individual. A report of our findings was shared with participants and no remarks were made regarding how the data was presented.

Results

At all 30 MHSs, one or more HPPs agreed to be interviewed, resulting in a total of 81 interviewed HPPs. Two of the interviews could not be recorded and were therefore excluded as data for this study.

This results section starts with the descriptions of HPPs of ‘an intervention that works’, the elements that comprise such interventions, the vague boundaries between an intervention and its context and the role of research. This is followed by the perspective of the HPPs on how the development and implementation of interventions in practice could be improved.

An intervention that works according to health promotion professionals

The HPPs generally described an ‘intervention that works’ as something that produces its intended effects after being realized in the local situation. When asked to be more specific, the HPPs started to describe the different elements (e.g. theory, funding, leadership, intermediaries, artifacts, competences) that comprise an intervention. The HPPs emphasized the importance of the process in which elements are combined, adapted and aligned into a configuration that is locally situated and works in practice. In their descriptions, the HPPs alternated between describing an intervention as a fixed ‘black box’ and describing it as a flexible, situated configuration of aligned elements. Analysis of the descriptions revealed that the HPPs referred to five different ‘versions’ (see Fig. 2) of an intervention: 1) the ‘original’ configuration realized by the developers in a selected situation, 2) the configuration described in scientific publications, which is a reduction of the original complexities, 3) the configuration described for the CGL recognition committee, 4) the configuration supplied to the MHSs (containing elements such as a handbook, training, an explicit theory, additional funding, etc.), and 5) the intervention realized in a local situation (which differs between locations).

The HPPs described a large variation in the extent to which supplied interventions were more or less completed. Some interventions comprised only a handbook and expected only that the HPPs send these to relevant teachers. Other interventions were predicated on the involvement of community members in the design and implementation of the intervention and required a much more active role of HPPs. The majority of HPPs preferred intervention designs that anticipated local adaptation and co-production (e.g. a ‘method’ with ready-made artifacts or an intervention consisting of finalized modules, such as a handbook with a number of separate lessons).

Vague boundaries between intervention and context

The HPPs found it difficult to precisely demarcate the boundary between an intervention and its context. For some interventions specific skills and funding were part of the supplied intervention, while other interventions assumed that this existed in the local context. The vagueness of this boundary was problematic when an intervention is passed on from one organization to the other, and the tasks and responsibilities for intervention elements are determined (e.g. who is responsible for the funding, competences, etc.).

We attempted to make a distinction between the ‘core elements’, that were mostly described as part of the supplied intervention, and ‘proximal elements’, that were mostly assumed to exist in the local context.

Core elements

As the core of an intervention, the HPPs described its theory or action plan and the artifacts which comprise it. “The essence of an intervention is the logic behind it, a good theory is essential” (HPP1). These theories were often not explicit, which made it more difficult to adapt interventions to the local context. Interventions could consist of all kinds of artifacts, including posters, letters to schools and gadgets. The HPPs preferred artifacts that were as finalized as possible, but still somehow adaptable. “A ready-made poster is useful, but in general adapting [artifacts] to the local situation remains crucial” (HPP2).

Various adaptations of artifacts were described, such as adding the logo and address of an MHS to prints or adapting the language and pictures to make them more appropriate for the target population. Information about an intervention was also considered part of it. Examples include information about the target population, the resources required (time and funding), the theory, the best implementation method, research findings and the outcomes that can be expected. Such information is important when choosing to adopt an intervention, and when realizing it in local practice.

Proximal elements

The HPPs described that interventions contain assumptions about the contexts in which they are to be realized. The most
explicitly described and problematic assumptions relate to the existence of specific competences and available funding at the MHS and characteristics of the target population. Interventions assume that HPPs have a range of competencies such as being able to negotiate with local policy makers and engaging intermediaries in health promotion. For some interventions, training for specific skills and competences is provided.

"It was good to do the Master class that is part of Spring Fever Week (intervention). It gave insight into its functioning and helped when we were talking with teachers" (HPP3). Most interventions assume that funding for staff and intervention-specific activities is locally available. "Each intervention we are supposed to carry out requires manpower. We cannot carry out all interventions, at all schools" (HPP4). For some interventions additional funding is provided by the TI: "They provide a set amount to employ some temporary staff as part of that intervention. It really works well" (HPP6). HPPs described how interventions contain assumptions about the target populations for which they are supposed to be used. HPPs often emphasized that the populations they work for are very different from those for which interventions are designed. "A lot of interventions are too white, and are aimed at target groups that are well educated. We deal with youth who have more diverse backgrounds and lower SES" (HPP2).

The HPPs also described a planning, local network, stewardship role and supportive local government as important for realizing an intervention that works. These elements were mostly described as part of the context, but still essential in realizing a working configuration. Planning is necessary for the functioning of an MHS, and specifically required for interventions that are carried out in combination with a national media campaign during a specific week of the year. "We draw up an annual planning well in advance in which an intervention needs to be given a place" (HPP7).

Fig. 2. Five versions of an intervention.

1. An ‘original’ version of an intervention is developed by aligning elements into a configuration that hopefully works in practice. This ‘original’ version is researched.

2. An intervention is made transferable by decontextualizing it. A boundary is drawn through the original configuration. A part is turned into a transferrable ‘intervention’, and the other elements become ‘context’.

3. For different purposes (e.g. publication, quality assurance, transfer to practice), different versions of the original configuration are made. Each version (reduction) has its own selection of elements and assumptions of contexts. The boundary between intervention and context is not necessarily clear.

4. A linear EB approach assumes that local complexities are transformed to resemble the context in which the original intervention worked. A selection of the original configuration is then supplied to this ‘context’.

5. To realize the original configuration, the ‘supplied intervention’ is aligned with the context.

6. A linear EB model assumes that the ‘original’ configuration is then recreated. In reality such a perfect ‘diffusion’ is unrealistic. The configuration that is realized is best understood as a ‘translation’ and will contain smaller or larger changes.
HPPs often expressed that in a few months time too many different interventions were supposed to be implemented at schools.

In some interventions, the local stewardship role of the MHS was an explicit element, while other interventions implicitly assumed that the MHS had such a role. To make interventions work in practice, a supportive local government that prioritizes the theme of an intervention is important. The HPPs described how enthusiastic civil servants were instrumental in realizing an intervention that works. “He asked us what he could do, got the local press involved and even spoke with some schools” (HPP6). For issues such as fall prevention and reducing tobacco use, there was little interest from the municipalities who considered these issues for the national government. “It’s not on their agenda and that makes it not easy to work on that issue” (HPP9).

Improving the development and implementation of interventions

We asked the HPPs what should be done to improve the development, supply and implementation of interventions. To structure the interviews we assumed a development and implementation ‘path’ with four phases: 1) intervention design and development, 2) supply and adoption, 3) adaptation and realization, 4) monitoring and ownership.

Intervention design and development

Most HPPs described that it was the task of the TIs to develop interventions and their own task to implement them. Because the interventions supplied by the TIs often did not fit their needs, they also had to develop their own interventions. There was a broad consensus that too many new interventions were being developed instead of there being a focus on improving and upgrading the existing interventions. “Tell them to please stop developing new interventions” (HPP10). The HPPs wanted to be involved in intervention development as advisors in a project group, implementers of a pilot intervention and as development partners. Furthermore, it was suggested that during intervention development there should be more focus on the differences between the contexts and target groups for which the MHSs work (small rural villages, larger cities, high or low SES, different religious backgrounds).

The fact that each TI works for a specific health promotion theme (e.g. smoking, nutrition, physical activity) resulted in both overlap (three TIs deal with sexually transmittable diseases) and a lack of integration of health themes in interventions. The lack of integration was most evident with respect to obesity, for which too many ad hoc interventions were developed, instead of integrated ‘programs’ that combined nutrition and exercise. Alcohol use among adults and elderly and prevention of depression at collective level also needed more attention. More targeted interventions were needed for groups of lower SES, elderly and migrants. The HPPs described the lack of coordination between TIs and the funding of intervention development through short-term project subsidies as the most important reason for the lack of alignment and harmonization between interventions.

Supply and adoption

The HPPs were asked why they chose certain interventions and not others, and how they preferred to be supplied with interventions. The HPPs explained that they chose interventions based on whether these suited their needs and priorities and whether they trusted the TI that supplied it. “Personal contact is important; it helps when you know someone when you call them on the phone.” (HPP11).

Interventions not used were those that seemed too large to use in practice, those for which there was little information available, those that the HPPs did not have the time to implement or those whose theme was not a local priority. The HPPs found it difficult to determine whether the supplied interventions were effective. “It has been studied by universities, so I assume it’s effective” (HPP6). The opinion of the HPPs toward effectiveness research showed a remarkable duality: they widely considered it important for the effectiveness of interventions to be thoroughly studied, but at the same time emphasized that the interventions they realized in practice were very different from the configurations that were researched. When we pointed out this contradiction, the HPPs insisted on the importance of research, but for other reasons. “We should continue research because it legitimizes what we do and helps establish health promotion as a profession.” (HPP12).

The HPPs wanted more information about the effects of interventions. They wanted to know through which mechanism(s) an intervention works, which elements are essential and why, and what is expected of the local context. “Give us a fact-sheet on constraints, effective elements and on how to adapt it” (HPP13). MHSs wanted better information about costs, time investment and experiences with interventions. This should be available in short fact-sheets, preferably with a link to background research. “We must know what the costs are, how much time we must invest in it” (HPP14). Such information could help in negotiations with municipalities.

The HPPs preferred interventions supplied to them as comprehensive packages of effective modules that were as complete as possible, but still adaptable. Ideally, interventions contain a ‘core’ module that should always be used, and a variety of other modules that could be employed for specific settings and target groups. The MHSs with a limited capacity for health promotion generally preferred interventions that are completed as much as possible, while the larger MHSs mostly preferred interventions that assumed local co-construction.

Adapting and realizing interventions in practice

The HPPs described their core task as promoting health by realizing interventions in practice. The most challenging aspects of realizing interventions are recruiting intermediaries, like schools, and down-scaling supplied interventions, while ensuring their effectiveness and determining the effects of interventions. The HPPs described how they are able to recruit only a minority of the schools or other intermediaries with whom an intervention is to be carried out. The limited budget that is allocated for health promotion is seen as the major constraint in implementing interventions. “We have hundreds of schools in our region and it is not possible to visit all of them and monitor the implementation of Healthy Schools.” (HPP15).

The most described adaptation is making an intervention smaller and less intensive. Schools are often willing to carry out only one or a few of the lessons, while interventions often contain 10 or more. It remains unclear to the HPPs whether their adapted versions of interventions are still effective. “We honestly don’t know.” (HPP16).

The HPPs explained that they are often hindered in their local stewardship role by other organizations that directly approach intermediaries (e.g. sport clubs, schools) without consulting them. “They send them beautiful books about how to stop smoking, and the next week someone else approaches them about another (health) theme, all without informing us. Schools just ignore it and throw it away. How are we supposed to coordinate health promotion?” (HPP11).

Ownership and monitoring

The HPPs stressed that for each intervention an organization, such as a TI, should fulfill an ‘ownership’ role. The ‘owner’ should supply the intervention artifacts (e.g. leaflets, posters, gadgets, M.O. Kok et al. / Social Science & Medicine xxx (2012) 1–9
DVDs), provide training, conduct research and collect lessons about an intervention and continue to improve it. When interventions are developed by academic institutes, the ownership role could be assigned to a TI. The process of intervening and the effects of interventions in the local context are seldom monitored. The HPPs considered monitoring important, but felt constrained by a lack of time, infrastructure and experience.

**Improvements proposed by HPPs**

The HPPs suggested that the development and implementation of interventions, and joint learning throughout these processes, could be improved by: 1) better anticipating the conditions in which an intervention has to work, 2) describing the elements that comprise an intervention that works, 3) clearly assigning responsibilities for elements and ownership roles for interventions, 4) coordinating activities between actors involved at local and national level (e.g. division of tasks, planning), 5) supporting and respecting the roles of organizations, and 6) gathering valuable lessons from a variety of learning processes (e.g. experience, monitoring, and implementation and effectiveness research) (see Box 1).

**Discussion**

The results indicate that HPPs consider an intervention that works a configuration of aligned elements that produces its intended effects after being realized in the local situation. The emphasis on the wider range of elements that has to be aligned (e.g. the local government, target group, school teachers, financial support) is interesting, because it helps one understand the circumstances in which a linear EB approach can work, its underlying assumptions and its inherent limitations. A linear EB approach starts with designing interventions and determining their effectiveness. What is often ignored is that the effect of an entire configuration is studied, instead of just a programme theory or a package of prevention lessons. Effects are subsequently attributed to only some of the elements (e.g. programme theory), instead of to the entire configuration (e.g. supportive local government, enthusiastic teachers, established local network). Successes in clinical care suggest that such reductionism and the emphasis on transferring and implementing fixed elements that comes with a linear EB approach can be productive. Our findings provide six reasons why attempts to apply a linear EB approach to health promotion may be less productive: 1) it is unclear what precisely constitutes an intervention, 2) it is unclear what an ‘effective’ intervention assumes of local contexts, 3) health promotion takes place in highly diverse and open settings, 4) health promotion organizations are very diverse and the system is not well developed, 5) it is impossible to realize similar configurations in different locations, and 6) it is difficult to determine if an intervention works in practice as intended.

The strategic role that the HPPs assign to research differs from the instrumental role that proponents of a linear EB approach tend to emphasize. The HPPs are in favor of effectiveness research to increase the legitimacy of their profession. In addition, effectiveness claims may help them secure funding and convince local stakeholders. At the same time, the HPPs stressed that the interventions they realize in practice differ substantially from the configurations to which the effectiveness claims apply. This strategic role of research is well known, but has not been described in health promotion. These findings support those who seek ways to more productively employ research to contribute to the improvement of health promotion (Brownson & Jones, 2009; Green et al., 2009).

The suggestions for improvement made by the HPPs contain four strategies for making a linear EB approach work: 1) adding more complexity (e.g. elements and their interactions) to intervention research and descriptions, 2) transforming intervention contexts to make them more similar, 3) better anticipating intervention contexts during their design, and 4) providing coordination for those actions that are distributed between involved organizations.

Adding more complexity to intervention research and descriptions can help those involved better understand what an ‘effective’ configuration actually entails. This is important for transferring interventions, for dividing and assigning responsibilities for intervention elements to the actors involved and for realizing ‘interventions that work’ in new situations. Research that takes more complexity into account is also proposed by the Realist evaluation movement (Douglas, Gray, & van Teijlingen, 2010; Jansen et al., 2006; Pawson & Tilley, 1997). An important process is the demarcation (or decontextualization) of an intervention from its context. To make an intervention transferable, a part of the configuration is selected to become the ‘intervention’ and the other parts become ‘context.’ This process is important because the selection made determines what is expected from the context in which an intervention is supposed to function. Despite its importance, this process is poorly understood and seems based on traditions and circumstances instead of on anticipating the situations in which an intervention has to work. The practitioners, researchers, and policy makers involved tend to blame disappointing results on each other when intervention boundaries and assumptions about local contexts remain vague. Better descriptions of what works for whom, in what context could stimulate mutual learning and more productive collaboration around interventions.

The HPPs suggested that the homogeneity of local contexts needs to be increased in order for a linear EB approach to work. The linear EB approach has its origins in clinical care in which interventions are often clearly defined (e.g. a surgical procedure) and contexts have been made very homogeneous (down to controlling the air flow in operation theaters). Health promotion contexts can be made somewhat more homogeneous by enhancing local capacities, strengthening organizations and providing more resources, but it seems unrealistic to expect major changes in intervention contexts like local schools and suburbs.

The necessity for transforming local contexts can decrease when those who design interventions at-a-distance better anticipate the situations in which interventions have to be realized. Some strategies to achieve this include engaging local communities and HPPs in the design of interventions, developing smaller interventions and testing them in more ‘natural’ practice settings through more pragmatic trials (Ayi et al., 2010; Chung et al., 2007; Thorpe et al., 2009).

While there are thus various strategies for approximating the circumstances in which a more linear EB approach can work, the results indicate that the interventions that are realized in practice will never be identical in different real-life settings and never exact copies of the original configuration to which effectiveness claims apply. What is realized in practice will always be a situated co-construction that is deeply embedded in a complex social context. Whether the intervention that is realized in practice is the most appropriate, cannot be determined by just comparing it to an original configuration. Appropriateness (or effectiveness) is not independent from context: it depends on the specific situation. This limits the extent to which the design and research of interventions in one situation can be the point-source of improvement for other situations, and supports those who challenge the idea that ‘fidelity to a preset protocol’ is the most important determinant of success (Cohen et al., 2008). Problems can emerge when the strict implementation of ‘evidence-based’ interventions is enforced. There is no guarantee that ‘evidence-based’ interventions are the best possible configurations in the specific circumstances and an assertive push.
may hamper the local dynamics that are needed to realize the most appropriate intervention. While this study provides a new perspective on health promotion interventions, it also has certain limitations. Our findings may be influenced by the selection of interventions. All ten interventions are relatively standardized and predefined. This may have increased the likelihood that a linear EB approach seems to work. Such an approach is less likely to work for interventions that more explicitly assume co-production through community engagement and local ownership. Secondly, a more ideal study would combine interviews with observations of how HPPs acquire and realize interventions in practice. This kind of ethnographic approach would require much more time and resources. The strengths of our study include the large sample of practitioners and settings and its practical relevance. Ultimately, what is important is what happens in local practice, as this is where the interventions that contribute to health are realized and situated. The key consideration is not centrally determining effectiveness, but joint learning and how this can lead to improved practices for health. Knowledge from heterogeneous sources and a variety of learning processes are needed. Learning is already happening in practice, and the challenge is to add to this with organized learning such as research and monitoring. Improvement efforts should be oriented toward the most promising range of distributed actions that lead to the realization of interventions that work in practice.

Organizations like the CGL can encourage the actors involved to focus on what happens locally and at the same time ensure that the actions that can be conducted at-a-distance actually contribute to local practice. An example would be to facilitate interaction between HPPs and TIs, and encourage the latter to develop smaller and more easily implemented interventions. The challenge is to find the right balance between what needs to be locally designed, learned and realized, and what the design and learning at-a-distance can add to this. There is no blueprint for how these actions should be distributed and organized, as this depends on the particular situation and goals of actors. The general rule is that the less local complexity can be predicted and controlled, the less a linear EB approach can be relied on, and the more depends on the local capacities to design and realize interventions and learn during that process. The most productive approach depends on the particular situation and has to be found by evaluating productivity in practice. Organizations like CGL can try to monitor who is doing what, evaluate outcomes, stimulate learning and the exchange of knowledge and provide coordination in the collective search for improving health.

Box 1. Improvements proposed by health promotion professionals.

1. Encourage developers to better anticipate the conditions in which an intervention has to work

The anticipation of the conditions in which an intervention has to work could be improved by involving HPPs and others in those aspects of intervention development to which they can contribute with their knowledge and skills. The development of new interventions should be demand-driven and take into account the variety of contexts in which the MHSs work. Instead of a stream of separate project-based interventions the HPPs would prefer to work with comprehensive and mutually aligned programs that consist of intervention modules.

2. Describe in detail the elements that constitute an intervention that works

For each intervention, information should be provided about the elements that comprise it and the assumptions about the context in which an intervention is to be applied (e.g. costs, local organization, leadership role, time, staff competences, theory).

3. Assign responsibilities and ownership roles for interventions and their elements

The description of intervention elements makes it possible to assign the responsibility for elements to the organizations that collaborate around interventions (who is responsible for what?). After an intervention has been developed, an organization should fulfill an ownership role which includes: collecting lessons about its realization, regularly updating and supplying materials and continuing development based upon insights from research and experience.

4. Coordinate activities between involved organizations at local and national level

A national organization like the CGL should coordinate activities between organizations by means of a centrally shared agenda in which important activities around interventions are announced (e.g. developing new interventions, supplying material, implementation).

5. Supporting and respecting the stewardship roles of local organizations

Local organizations like the MHSs play a crucial role in coordinating and networking for interventions at the local level. National organizations need to take these organizations into account in their activities and respect and support their local roles.

6. Gather lessons from various kinds of learning processes

A central organization should collect and integrate lessons gained from various kinds of learning such as experience, monitoring and implementation and effectiveness research. Questions from practice should guide the search for new knowledge about specific interventions and more general intervention mechanisms.
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