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COMMENTARY

Evidence-based policy revisited: orientation towards the policy process and a public health policy science

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Travelling between two paradigms: evidence-based medicine and the policy sciences

At a time when the debate on evidence-based medicine was already followed by a broad audience from both science and practice in the mid-1990s, it was suggested that the evidence-based approach should also apply to health policy: "If doctors are expected to base their decisions on the findings of research surely politicians should do the same" (Ham et al. 1995, p. 71). Subsequently, it has been claimed that evidence-based policy "is not simply an extension of evidence-based medicine: it is qualitatively different" and that "context is all important" (Black 2001, p. 277). With regard to health promotion, McQueen and Anderson (2001) emphasized the need for adequate theory in the evidence debate, pointing to the fact that theories of collective decision-making (e.g. in policy processes) are largely distinct from individual decision-making (e.g. in medical practices).

To deal more adequately with the context and specificity of the world of policy and the utilization of scientific knowledge in it, Harold Lasswell, a pioneer of the "policy sciences", has emphasized the need for a "policy orientation" in research. In his view, this policy orientation is twofold:

"In part it is directed towards the policy process, and in part towards the intelligence needs of policy. The first task, which is the development of a science of policy forming and execution, uses the methods of social and psychological inquiry. The second part, which is the improving of the concrete content of the information and the interpretations available to policy-makers, typically goes outside the boundaries of social science and psychology" (Lasswell 1951, p. 3).

I argue that up to now, the discussion on evidence-based policy in public health has mainly focused on Lasswell's "second part", i.e. the evidence base of the policy content (in Lasswells words: "the intelligence needs of policy"), but has widely neglected the first one, the evidence base of the policy process ("a science of policy forming and execution"). In the following sections, I will indicate the major differences between previous contributions and the orientation towards the policy process proposed here.

Policy orientation in the production of evidence

There are several papers emphasizing that the "golden standard" of evidence-based medicine, with a certain hierarchy of evidence and an emphasis on randomized controlled trials (RCTs), does not fit well to evidence-based policy. Different authors have pointed to an "inverse relationship" (Nutbeam 2003, 2004) or even an "inverse evidence law" (Petticrew et al. 2004; Ogilvie et al. 2005; Brownson et al. 2009), arguing that scientific reviews using selection criteria that prefer experimental study designs tend to exclude certain types of interventions that could provide especially relevant information for policy development, e.g. natural experiments. Within the lively debate in the UK, Macintyre (2011, p. 567) has recently indicated a potential "renaissance" of RCTs, stressing the need for "robust randomised evidence" to support public health

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policies. By contrast, Bambra (2009, p. 867) envisioned that the "next stage" in the "evidence-based policy movement" is to be "less cautious and self-censoring" in using "non-experimental evidence" and to be "more open to the methods and approaches of the social sciences".

Unlike this broad debate on the production of scientific evidence *for* informing policy and improving the policy content in public health, the production of evidence *on* the public health policy process itself is not well developed yet. Recently, Breton and de Leeuw (2010) conducted a systematic review on policy research in health promotion, identifying only 31 out of 8,337 articles in 11 leading peer-reviewed journals that were based on sound theories of the policy process. For example, the MAREPS Project, an international comparative study on developing a methodology for evaluating health promotion policies (Rütten et al. 2003a, b), is listed among the few policy process oriented approaches recognized by this review. In this pilot study and subsequent projects based on the ADEPT model (Rütten et al. 2010), causal links between policy determinants and policy impact were investigated. Such determinants may refer to the contextual factors of policy making (e.g. organizational capacities and resource allocation, elections, public opinion and media interest), while a potential policy impact might be the implementation of new public health strategies. The methodology applied in studies such as these is based on different approaches of policy analysis. For research on policy processes, case study designs and comparative methods are more likely to be appropriate than experimental designs and statistical methods. Moreover, multiple methods of data collection (e.g. policy maker interviews, document analysis, participatory observation) are used in these contexts.

Policy orientation in the utilization of evidence

The importance of understanding the policy context as a prerequisite for understanding the conditions for the utilization of scientific evidence in policy making was recognized early in the debate (Black 2001; Lomas 2000; see also Bowen and Zwi 2005). However, previous contributions on the contextual factors of evidence-based policy in public health have focused mainly on the utilization of scientific evidence on health determinants and on public health interventions. They widely neglected how the constitutive factors of policy making determine evidence-based policy processes. As a consequence, previous contributions tend to equate the evidence-based content of policies with evidence-based policy per se or, to put it differently, they tend to confuse policies dealing with interventions proven to be effective in epidemiological studies with effective policies.

I would argue, by contrast, that interventions proven to be most effective at population level will have no chance to affect the population if the respective policy processes fail to implement them properly. For example, physical activity has been identified as a key determinant of health, and environmental approaches to promote physical activity in the population have been recommended as "evidence-based" interventions (Kahn et al. 2002). If public policies aim at implementing such approaches, their *content* is indeed evidence-based. Nevertheless, if these policies fail (1) to specify concrete goals, (2) to allocate sufficient personnel and financial resources, and (3) to use public and political opportunities for implementation, they will fail to approach key determinants of effective policy development and implementation. Thus, these policy processes are not based on evidence concerning "what works" in policy processes.

Policy orientation in the translation of evidence

Different concrete approaches to knowledge translation in public health have been discussed in the last decade. Some of these approaches were based on theoretical frameworks and systematic reviews (e.g. on theories of diffusion of knowledge and organizational learning, Greenhalgh et al. 2004), while others introduced and investigated specific organizational frameworks for "more effective knowledge transfer" (Lavis et al. 2003). Regardless of the preferred model of knowledge translation, however, most of the previous literature in public health has focused on translating scientific evidence on health determinants and public health interventions into policy. Again, such approaches cover only partially the proposed policy orientation, as they focus primarily on the impact of research on concrete policy *contents*.

For a policy process orientation in public health research, the translation of evidence on "what works" in policy making into public health policy processes is a key issue. In particular, we should analyze how knowledge translation can affect key determinants of policy development and policy implementation. To achieve this, evidence on determinants of the policy process could be combined with interactive models of knowledge translation (Rütten et al. 2010). For example, the EU funded PASEO Project (DG SANCO Health Programme, Grant Agreement No. 2008 12 19) focused on policy analysis as well as on policy development and policy implementation in 15 EU countries. First, a theory-based and empirically tested model of policy determinants was used to assess policy capacities for the promotion of physical activity for older people in the regional or national policy context of participating countries. Second, an interactive approach was employed to

engage policy makers and stakeholders from different sectors and organizations in a co-operative planning process with researchers. This process aimed at improving the intra-organizational and inter-organizational capacities of participating organizations to increase the further impact of their policy making on the promotion of physical activity for older people. Third, both outputs and outcomes of the co-operative planning process were monitored. In particular, improvements in policy capacities were evaluated.

Conclusion

While we are better informed today about the differences and gaps between the worlds of science and policy, the public health debate on evidence-based policy so far rarely reflects the evidence base of the policy process. I propose to shift the further discourse towards a stronger "policy orientation" that contextualizes evidence-based policy in public health in a way already outlined by the pioneers of the policy sciences many decades ago.

The proposed shift in perspective would add a new fundamental dimension to the discussion on what kind of evidence is relevant in public health policy. In previous approaches, relevant evidence mainly referred to two dimensions: First, the causal links between health determinants and health outcomes, and second, the causal links between public health interventions and health determinants. The additional third dimension proposed here, by contrast, is related to *the evidence of the policy process*. In particular, it focuses on the causal links between policy determinants and policy outcomes.

There is a broad consensus in the current literature that the evidence of the first and second dimension is only one potential aspect among many others to be considered in public health policy making. Of course, as public health scientists, we will continue to broaden the evidence base in these two dimensions. This is a genuine task of our scientific orientation. Moreover, we should further develop and refine our approaches to translate evidence of the first and second dimension into policy. Beyond this, however, we should strengthen the policy orientation in public health research and focus on the third evidence dimension to move towards more effective policy making in public health. This does not imply a reduction in scientific rigor. Quite to the contrary, in order to establish a *public health policy science* of this kind, we will need to build adequate theoretical frameworks, develop an adequate methodology, and conduct the respective empirical research.

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