



Evidence-informed policy making to enhance physical activity in six European Countries

Project Number	281532
Project Acronym	REPOPA
WP No 1	Role of evidence in policy making
Type of Activity	RTD
Delivery number	D1.1: Role of evidence in policy making
Dissemination level	PU
Delivery date	14 June 2013, 18 months
Project start date and duration	1 October 2012, 60 Months

Draft prepared by WP1 leader, THL (Beneficiary 4; National Institute for Health and Welfare, Helsinki, Finland; Riitta-Maija Hämäläinen and Tiia Villa); and revised and accepted by the REPOPA consortium: National Institute for Health and Welfare, Helsinki, Finland; (Riitta-Maija Hämäläinen and Tiia Villa); SDU (Beneficiary 1, REPOPA Coordinator, University of Southern Denmark, Esbjerg and Odense, Denmark; Arja R Aro, Mette W Fredsgaard, Maja Larsen and Thomas Skovgaard); Tilburg University (Beneficiary 2; Tranzo, Tilburg University, Scientific Center for Care and Welfare, Tilburg, Netherlands; Ien van de Goor and Hilde Spitters); BBU (Beneficiary 5, Babes-Bolyai University, Cluj-Napoca, Romania; Razvan Chereches; Diana Rus and Petru Sandu); CNR (Beneficiary 6, Institute of Research on Population and Social Policies (IRPPS) and Institute of Clinical Physiology (IFC), National Research Council, Rome and Pisa, Italy; Fabrizio Bianchi, Tommaso Castellani, Liliana Cori and Adriana Valente); uOttawa (Beneficiary 7, University of Ottawa, Ottawa, Canada; Nancy Edwards and Sarah Viehbeck); RCPH (Beneficiary 8, Research Centre for Prevention and Health, Capital Region of Denmark, Glostrup, Denmark; Charlotte Glümer, Cathrine Juel Lau and Torben Jørgensen); HPCT (Beneficiary 9, Herefordshire Primary Care Trust, now merged under The Herefordshire Council, Herefordshire, United Kingdom; Clare Wichbold and subcontractor Nick Cavill, Cavill Associated Ltd., Cheshire, United Kingdom); CBO (Beneficiary 10, former NIGZ), Dutch Institute for Healthcare Improvement, Utrecht, Netherlands; Annemiek Dorgelo and Jan Jansen)

The Research into Policy to enhance Physical Activity (REPOPA) project is funded by the European Seventh Framework Programme (FP7/2007-2013) under grant agreement no 281532. Neither the European Commission nor any other person on its behalf is responsible for any use that may be made of the information contained therein.

List of contents

EXECUTIVE SUMMARY	ii
1. INTRODUCTION	1
2. THEORETICAL BACKGROUND	2
2.1. Interrelationship between policy making and research evidence	2
2.1.1. Policy, policy making and types of evidence	2
2.1.2. Evidence	3
2.1.3. Evidence-informed policy making	3
2.2. HEPA policies and policy making	4
2.3. Studies on physical activity and HEPA policies in Europe	5
2.4. Facilitators and barriers for the use of research evidence in HEPA	6
3. RESEARCH METHODS	7
3.1. HEPA policy selection	7
3.2. Analysing HEPA policy documents in REPOPA	9
3.2.1. Interviews of the main stakeholders of the chosen policies	9
3.2.2. Discourse analysis of some HEPA policy documents	10
4. RESULTS	11
4.1. Use of evidence in HEPA policy making – knowledge and information sources	11
4.2. Barriers and facilitators for the use of research evidence in HEPA policy making	12
4.2.1. Needs of policy makers	13
4.2.2. Networks, collaboration and partnerships for knowledge generation and gathering	13
5. PLATFORMS FOR KNOWLEDGE EXCHANGE FOR HEPA	15
6. PRELIMINARY REPOPA FRAMEWORK AND INDICATORS	17
6.1. REPOPA framework	17
6.2. REPOPA indicators	17
6.3. Methodological note	18
6.4. European added value	19
7. CONCLUSIONS	20
REFERENCES	23

Executive summary

The Research into Policy to enhance Physical Activity (REPOPA) Consortium aims to integrate scientific research evidence and expert know-how with policy making processes to increase synergy and sustainability in promoting health and preventing disease among Europeans. The REPOPA Consortium brings together scientific researchers, experts, policy makers and stakeholders from different disciplines and countries. The REPOPA Consortium consists of scientific excellence in health research, including physical activity, and links to real life experience in policy making and expertise in knowledge translation in six countries in Europe and in Canada. This report summarizes the results of the first 18 months of the five-year project, and is the final report for the REPOPA work package 1. Six EU countries participated in the research reported here; Canada's role is to be the evaluator of REPOPA.

The objectives of REPOPA during the first reporting period were to assess the needs, roles and use of research evidence in policy making and to study possible ways that research evidence is combined and negotiated with 'other kinds of evidence' in cross-sector policy making processes focusing on physical activity policies, more specifically health enhancing physical activity (HEPA) policies. *HEPA policies* comprised policies that had a focus on HEPA. Whereas *HEPA-related* policies were those that had a general focus on public health or transport, but nevertheless mentioned HEPA as an important part of the policy. The terms 'knowledge integration' and 'knowledge exchange' are used as the main terms in REPOPA and in this report. Rather similar terms, like 'knowledge transfer' and 'knowledge translation', can be found in the scientific literature.

In order to identify the needs of policy makers as regards evidence utilization, and identifying how these needs are met by the research community, the partners analysed and reported findings from 19 selected HEPA policy documents on research evidence and other types of evidence used in formulating HEPA policy making on national, regional and local levels. Stakeholder interviews in each EC country complemented the information on facilitators and barriers for evidence use. The interviews also provided information on how to develop the best interaction between policy makers and the research community in delivering and communicating evidence. These results of both the policy document analysis and interviews were discussed at national and international scientific conferences and other meetings.

The findings of this research suggest that research evidence was put to use in connection with the decision-making processes of policy development, but not in a systematic or explicit way. There were some links or references to research evidence in the HEPA policy documents. However, in many cases it was not possible to identify the original research sources, as they were mixed with other kinds of evidence, such as experiences, values, political statements, and ambitions. Interestingly, in this study, sample of local-level policies seemed to use research evidence more explicitly than national-level policies. Examples of other kinds of information used in the HEPA policies were good practices, information from media (newspapers, internet), information about society (economics, traditions), political statements and community activity (values, inspirations and citizens' opinions).

Various facilitators and barriers were identified for the use of research evidence. Main facilitators included receiving support from administration departments to use research evidence and an organizational culture

that supported the use of research evidence. Other facilitators consisted of achievable and relevant research that contained information that was easy to apply in practice. Furthermore, an important facilitator was direct or institutional relationships between policy makers and researchers. The research bodies may function as knowledge brokers through open forums (such as seminars) or through direct relationships. However, it is crucial to find a common language between policy makers and researchers.

Main barriers for the use of research evidence consisted of traditions, certain bureaucratic and organizational factors as well as the nature of policy making processes and political interests, such as pursuit of voters and a value base. There was also a lack of concurrency between the research carried out and policy making processes, and a lack of applicability of research evidence to policy making. Furthermore, there was a lack of time, financial and human resources, competences and joint criteria for the use of research evidence in the policy processes (formulation, development, implementation, monitoring and evaluation). As a conclusion, the insufficient collaboration between researchers and policy makers in general was seen as a barrier for the use of research evidence in policy making.

To carry out its objectives, the REPOPA Consortium developed a proposal for an evidence-informed policy making framework (REPOPA framework) to guide its work; and based on this framework, the consortium will develop indicators to monitor and assess evidence-informed policy making processes (REPOPA indicators). The framework and indicators will be refined and tested based on the results of the work package 1 and the following work packages of REPOPA.

Furthermore, to facilitate and enhance sustainability in evidence-informed policy making, the Consortium will establish platforms for cross-sector evidence-informed policy making in all participating countries during the REPOPA project time. Each partner can either search for in-country work group or launch a forum that has an interest in evidence-informed policy making to enhance physical activity on local, regional or national level. This kind of platform was formed during the work package 1 in Finland, where a common platform for HEPA policy discussion was established by the working group in conjunction with others that allowed access to information on physical activity within the Ministry of Education and Culture. As a member of the working group, THL (work package 1 leader) participated in this process.

The work package 1 results will be used in the other REPOPA work packages, both in the work package 2 and work package 3 interventions that are aimed at increasing cross-sector collaboration and stewardship-based tailored integration of research evidence and real-life policy making. These experiences will be formulated into guidance resources and policy briefs which will be tested and validated in work package 4 to promote on-going communication between scientists, research centres and policy makers.

The address of the project public website: www.repopa.eu

1. Introduction

This report covers the process and outcomes of the first part of the Research into Policy to enhance Physical Activity (REPOPA) project, which can be summarized as a study of the integration of research evidence and 'other kinds of evidence' in health-enhancing physical activity (HEPA) policies in six European countries (Denmark, Finland, Italy, the Netherlands, Romania, and United Kingdom). A Canadian partner acts as an external evaluator for the REPOPA project. The consortium has chosen to focus on HEPA policies in order to capture a broad scope of health promotion in policies to enhance physical activity, which also comprises sedentarism and environmental infrastructure. Work package 1 covers the following overall project aims 1) to assess the needs, role and use of research evidence in policy making, and 2) to study ways in which research evidence is combined and negotiated with 'other kinds of evidence' in HEPA policy making. The National Institute for Health and Welfare (THL, Helsinki, Finland) has led the work package with each of the partners in turn being responsible for the national conduct of the work package.

More in depth, the study objectives in work package 1 were to explore and analyse the ways in which research evidence and other kinds of evidence is used when formulating local/regional and national policies to enhance physical activity; to identify the needs of policy makers in regard to making use of research evidence (facilitators and barriers) and how these needs are met by the research community; to evaluate ways of delivering/communicating evidence to policy makers; and to develop both a framework and indicators for evidence-informed policy development.

The main tasks of work package 1 have been 1) the identification of national and regional/local policies for policy analysis, 2) analysis of policy documents and stakeholder interviews to identify what kinds of evidence were used and 3) how they were used to develop the policies. In addition, the published literature has been used; both the literature in the REPOPA Document of Work and more recent literature. Also the usability of existing infrastructures for knowledge exchange (such as centres of expertise, evidence centres, knowledge brokers, and the potential web-based provision of research evidence) have been identified and evaluated. Based on the previous literature and the research findings of both policy analysis and interviews an initial REPOPA framework and indicators for assessing and analysing evidence-informed policy development have been suggested. Both the framework and indicators will be revised based on new findings throughout the life of the project.

The terms 'knowledge integration' and 'knowledge exchange' are used as the main terms in REPOPA and in this report, although literature uses interchangeably 'knowledge transfer' and 'knowledge translation'. The term 'evidence' is used for both best available research evidence and other kinds of evidence such as expert know-how and contextual priorities, values and resources.

The purpose of this final report for work package 1 is to summarize the main results concerning the HEPA policy documents and interview analyses conducted in the six European REPOPA partner countries. The report consists of the theoretical background, research methods, main results, discussion, implications, and conclusions.

2. Theoretical background

2.1. Interrelationship between policy making and research evidence

The purpose of this chapter is to introduce the policy making process and use of research evidence and other types of evidence in policy making. The theoretical approaches to studying knowledge exchange are briefly described. Also earlier studies on evidence-informed policy making in HEPA are described.

2.1.1. Policy, policy making and types of evidence

In this study policy, policy making and types of evidence are important concepts, which are briefly described. Policy as a term is a plan or course of action for a government, political party, or business to influence and determine decisions, actions, and other matters. Based on Walker et al (2003) a policy is a set of actions taken by an administration to control the system, to help solve problems within it or caused by it, or to obtain benefits from it. Policy documents can for example be strategic papers, decisions by the government, plans of the ministry, or statements. Bell (2010) summarizes that policies can be classified as functional policies dealing with the roles of services for a society or sector (practical level physical activity arrangements e.g. in municipalities); intentional policies dealing with statements of purposes or goals (national physical activity policies); population-focused policies dealing with statements or actions targeting certain population groups (e.g. policies to enhance physical activity among elderly or certain immigrant groups); and programmatic policies relating to a package of related policies (healthy cities policies). Policy gives direction for actions to be carried out and guides the selection of issues, matters and actions. Policy making is the formulation of ideas or plans that are used by an organization or government as a basis for making decisions.

The process of policy-making consists of various stages of problem identification and issue recognition, policy formulation, policy implementation, and policy evaluation (Walt 1994). Policy development is a continuous process of initiation, adoption, implementation, evaluation, and reformulation, but not necessarily a linear social and political process (Milio 1987). Policy processes include also testing the agenda, specifying possible alternatives, making an authoritative choice from those alternatives, and implementing the decisions (Kingdon 1984). The policy making is often a process of negotiation, bargaining, and adjusting among different interest groups that aim to influence policy choices and alternatives. Policies are intertwined together with their aims, objectives, and implementation to avoid conflicts. Therefore during the HEPA policy analysis, the context and the policy making processes were explored during the document analysis and complemented by the interviews to understand the choices made for the use of evidence.

Policy makers can be contrasted with practitioners who implement (and interpret) policy. Practice and policy are not really separate. E.g. a review of health research and policy making (Bell 2010) identified: a) governance/legislative policy making; b) service/administrative policy making; c) practice/clinical policymaking. This shows that policy makers can be legislators, bureaucrats, clinical health service administrators etc. Further, policies operate on micro level (local community), meso (regional) and macro (national or international) level, which are often interdependent. In the REPOPA policy analyses, policy

makers were characterized as individuals, who have an active and/or influential role in formulating the policy content or developing the policy.

2.1.2. Evidence

When identifying research evidence used in policy making one can pay attention to demographic and statistical data (facts and reports used as background or for prioritizing policy areas), systematically and non-systematically derived peer-reviewed scientific literature (ad hoc search for research articles or other similar materials which are not systematically assessed and applied) or systematically derived peer-reviewed scientific literature (literature derived from a systematic literature search in databases, reviewed, summarized and contextualized to a specific policy context). In addition to research evidence, standards and guidelines (international, transnational, national, regional or local) and knowledge derived from community consultations, stakeholder workshops, and in-house consultations bring evidence to policy making. Also various types of reports (national reports on urban development and HEPA or other reports) and knowledge derived from expert consultations or policy briefs developed by research institutions and studies can be used for policy making (Lavis, Ross, Hurley et al. 2002). Looking at the types of evidence other than research evidence, it can be seen that in many policy making processes, colleagues or relevant areas of expertise are also used for evidence-informed decision making (Kothari et al. 2009; Orton et al. 2011). The policy making process and use of research evidence and other evidence is usually influenced by the positions of stakeholders or existing institutional arrangements at national, regional and local levels (Lavis et al. 2003).

The available collection of facts or information indicating whether a belief or proposition is true or valid can be defined as evidence. In the REPOPA project, evidence-informed decisions are made by combining best available research evidence with the population characteristics, needs, values and preferences and people's experiences and circumstances, all in the view of the environmental and organizational context (Satterfield et al. 2009). As a reaction to the traditional approach of evidence-based policy making, Young et al. (2002) proposed a realistic approach which should be directed towards evidence-informed policy making. Evidence for larger contexts (Regehr, Stern, and Shlonsky 2007) consists of professional expertise, management and policy, in addition to practice. The model includes intra-organizational, extra-organizational, and practitioner-level factors that need to be taken into account when merging evidence and practice. This more developed appreciation for political, economic, organizational, and other contextual factors represents an important perspective that has been absent from most models of evidence-based practice. The Knowledge-to-Action Cycle (Straus et al 2008) provides a framework describing the process of integration of best available research evidence with local context and practice, adaptation, implementation, and evaluation of policy (or intervention) and feeding back to the knowledge base. The general consensus (within public health field) is that knowledge generated from research is just one type of information, supplementing information stemming from, for instance, professional and practical experience (Nutley et al. 2007, Head 2008).

2.1.3. Evidence-informed policy making

Various countries and different policy sectors are interested in the model of evidence-informed policy making to remedy the problems regarding the (in)effectiveness of policies. While emphasizing the use of scientifically derived expert-knowledge in the design of decision-making procedures, the model of

evidence-informed policy making has also been presented as saving citizens from the pitfalls of ideologically-driven policies or otherwise haphazard decisions (Lin & Gibson 2003). The use of research evidence is often challenged by the complexity and non-linear character of policy making processes and that those policies should not be solely based on research evidence. The linear relationship is dependent on an unrealistically simple account of policy making as policy decisions are contingent upon many other factors, such as ideology, values, public opinions and lobbying (Young et al. 2002, Smith, Joyce 2012).

The literature suggests that use of research evidence would be improved by overcoming institutional, cultural and communication gaps between research producers and users (Lomas 2000, Pettigrew et al. 2004). Increased interactions between policy makers and researchers are likely to increase research utilization (Lavis et al. 2005, Walter et al. 2005). Co-productions of research, where research users are directly involved in the research process, seem to increase the use of research evidence (Lavis et al. 2005, Pope et al. 2006).

Often the professional boundaries between researchers and research users have led to tensions between stakeholders involved in the policy process. These stakeholder groupings can be theorized to be policy networks (Marsh, Rhodes 1992, Marsh, Smith 2000), epistemic communities (Haas 1992) and advocacy coalitions (Sabatier, Jenkins-Smith 1993). Epistemic communities are groups of professionals usually recruited from various disciplines with specialist knowledge and acting as conduits for knowledge that serve policy makers (Haas 1990). Knowledge translation is rounded by multiple relationships and boundaries between knowledge producers and knowledge users in the infrastructure of knowledge exchanges. Both knowledge utilization and knowledge translation use various routes between stakeholders so as to realize the information exchange. Despite challenges between information producers, users, brokers and others, one needs to take into consideration the multiple links and divisions around the use of information and evidence, and thereby try to focus on explaining knowledge translation across boundaries, towards whole systems of HEPA (Young et al. 2002, Duncan 2005).

To sum up, evidence-informed policy making is a contingent, complex system-like, non-linear and emergent process of producing, managing and implementing new knowledge. Most authors appear to agree with at least the possibility that evidence-informed policy making can work as a virtuous cycle to improve policy making, even if there are widely divergent ideas about what constitutes the component parts of the evidence-informed policy making process, how this can and should be done and what it should achieve (Best and Holmes 2011, Shine, Bartley 2011).

2.2. HEPA policies and policy making

The definition of HEPA has different starting points, from a health promoting entity, to shifting attention away from competitive sport and elite sport, or as a means for marketing and establishing trade and commerce for services and goods (equipment, cloths, construction material etc.). Many citizens practice physical activity in their daily life, but the definition of HEPA includes always a presumption of physical activity which adds health to individuals' lives. HEPA emphasizes the connection with health by focusing on any form of physical activity that benefits health and functional capacity without undue harm or risk. Physical activity does not need to be strenuous to be effective, although, in general, HEPA comprises activities that are of at least moderate intensity. Thus a minimum of thirty minutes of moderate activity per day remains a primary public health recommendation. The choice of activities is ample and include brisk walking, cross-country skiing, washing windows or a car, cycling, gardening, shovelling snow, swimming,

mowing the lawn, walking to work or shops, dancing and walking the dog (Foster 1996, 2000). The benefits of HEPA for health have been widely reported (Caspersen, Powell, Christenson 1985, Manson et al. 2002, Oja, Borms 2004, Sjöström et al. 2006, Heath et al 2012, Lee et al 2012, for example).

Based on the analysis conducted for the Document of Work for REPOPA there is a lack of systematic analysis of the role of evidence-informed policy making in HEPA policies. Neither has it been studied to what extent national, regional or local level policy makers really use research evidence to justify or legitimize their actions. Analysing the use of research evidence and other types of evidence in policy making contributes to understanding HEPA policy making and knowledge integration in relation to organizational learning and ways of communicating research evidence top-down and bottom-up in policy processes. In many cases, the evidence available for promoting physical activity derives from sport and health sciences, despite the fact that cooperation with other sciences might prove even more fruitful in contributing to enhance physical activity.

HEPA policy making is expected to give guidance about the alternative target groups of the action, about how to organize and finance HEPA, or what kind of services for HEPA should be made available. HEPA is often seen as part of a health policy even though the organizational frame at national, regional or local levels extends to other areas than health, that is, mostly to culture, transport, education and/or sport sectors and where health usually is not the primary focus. Therefore, the decision making and policy making for HEPA are not always the result of health-related discussion, evidence and evaluation. The contexts in which the decisions and policies are made are often quite political concerning the degree of public physical activity provision and funding. HEPA policy decisions also depend on value judgments, which are implicit in all societies, but important to understand for the implementation of policies (e.g. values based on socio-economic differences in HEPA).

2.3. Studies on physical activity and HEPA policies in Europe

In relation to HEPA policies, abundant health benefits of physical activity have been reported in scientific journals (Heath et al 2012). Within the European Union there are different traditions for HEPA policies. This is clearly presented in the two reported policy analyses of physical activity policies in Europe (Daugbjerg et al. 2009, Bull FC et al. 2004). Concluding from these studies, the development principles of a policy should be followed more closely to increase the effectiveness of the preparation and implementation of HEPA policy. For policy development, three interrelated factors can be described as influencing the development, implementation and outcomes of physical activity policy: the knowledge base (research/evidence), social strategy (effective interventions/solutions) and political will.

Cavill et al. (2006) emphasized a cross-sectorial approach at both national and international levels in HEPA policies. Schöppe, Bauman and Bull (2004) reviewed national physical activity policies and found insufficient approaches in process evaluation and monitoring of physical activity policies. There was also a lack of delineation of roles and accountability among partners and concrete timeframes for the funding and implementation of single strategies. The studies from Europe suggest that research evidence can be an effective facilitator of health promotion policy implementation when political will is low (Lengerke et al. 2004). Bornstein, Pate and Pratt (2009) surveyed six national physical activity plans and concluded that plans were lacking in regard to roles and leadership responsibilities for implementing the plan, including measuring progress and evaluating the plan.

For the sake of utility, comparative research on HEPA policies should involve a systematic assessment of structures and institutional arrangements in order to lead to physical activity and to shape the formation, implementation and effectiveness of policies and interventions designed to increase HEPA. To sum up, the international comparative work on physical activity policies has leaned toward country-specific descriptive case studies or decontextualized systematic reviews of physical activity policies, neither of which yield firm conclusions about the factors that might influence observed differences in policy approaches or outcomes. However, one can note that process evaluation, monitoring, accountability, implementation, further interaction between stakeholders and use of research evidence were insufficiently present in the analysed HEPA policies.

2.4. Facilitators and barriers for the use of research evidence in HEPA

While research evidence about HEPA might be available, it appears not to be optimally used to inform policy making (Lomas 2000, McCaughey, Bruning 2010). According to Lavis (2009) there is a substantial amount of information regarding the question of how to increase the use of research evidence by policy makers. Policy makers are likely to use research evidence if they have easy access to relevant and useful research and have frequent opportunities to interact with researchers (Lomas et al. 2003) and work in organizations that are research receptive (Bowen, Zwi 2005). Based on Bowen and Zwi (2005), the actors that were the key to increase the use of research in policy making were managers, public officers and administrators. There is a significant difference in the use of research evidence by clinicians and by policy makers, as clinicians concentrate on a specific issue and policy makers need to pay attention to larger entities, such as communities, municipalities, resources, politics and other considerations (Aro, Smith, Dekker 2008).

Moore et al. (2011) reported that tailored and targeted messages, with access to registries of research, as well as the training of policy makers, may increase the use of research evidence. Knowledge brokers and frequent interaction between policy makers and researchers were not found to be efficient, but could possibly built trust and receptivity that would facilitate the use of research evidence. The most common facilitator for the use of research evidence was personal contacts, timely relevance of research and the inclusion of summaries with policy recommendations. Also organizational factors, such as receptivity to research findings influenced the use of research evidence (Aro, Smith, Dekker 2008).

3. Research methods

HEPA policies were analysed by using policy analysis as a technique and tool to study the characteristics of policies, how the policies came to be, and what their consequences were (Ham 1990, John 1999, Ritchie, Spencer 2002).

In the REPOPA study, policy analysis was methodologically close to the policy making approach (Portney 1986, Walt 1996), where a policy is a political process and has stages of problem formation, policy formulations, policy adoption, policy implementation and policy evaluation. As policy analysis often deals with broad questions, it is subject to considerable uncertainty (Pope et al. 2000, Mays, Pope 2000). Policy analysis can be divided into two major fields: the analysis of policy can be analytical and descriptive, i.e., it attempts to explain policies and their development; and the analysis for policy can be prescriptive, i.e., it is involved with formulating policies and proposals (e.g., to improve health enhancing physical activity) (Bunton, Nettleton, Burrows 1996). The area of interest and the purpose of analysis determine what types of analyses are conducted. The analysis presented here was the analysis of policy, but the analysis can be used for policy making.

3.1. HEPA policy selection

At least two actual HEPA policies or HEPA related policies were identified from national, regional or local levels in the EC partner countries and selected for analysis in a way that brought richness and variation to the study (Table 1). For the policy analysis 19 policies were selected. HEPA policies were defined as those that had a focus on HEPA only. HEPA-related policies were those that had a general focus on public health or transport, but nevertheless mentioned HEPA as an important part of the policy. The baseline variations of the 19 HEPA policies were between national, regional and local policies and their choices of HEPA topics. In the rest of this report the term HEPA policies only will be used.

The first part of the REPOPA study tried to understand how much research evidence and other types of evidence was used in policy making, who participated in policy making, and how consideration was given to research evidence and/or other types of evidence as policies were formed and decisions made. In the selection of policies for the policy analysis, the aim was to accommodate various types of policies and bring about possibilities for comparisons between countries and policies.

In each policy case, the sources used for policy development were identified, such as policy makers (legislators or policy advisers), researchers (those whose research may have been used in the policymaking process) and documents (list of proclaimed legislation and other background documents). Some policies referred directly to research evidence or noted the sources of evidence in the list of reference. When looking at evidence-informed HEPA policy making, the stakeholders and developers of policies were the primary sources of information.

Table 1: Selected national, regional, and local HEPA (related) policies for the policy analysis

National	Regional	Local
<p>Nutrition, healthy weight, physical activity, sport, HEPA</p> <p>Finland: Government resolution on development guidelines for health enhancing physical activity and nutrition, 2008</p> <p>Finland: Government resolution on policies promoting sport and physical activity, 2009</p> <p>Netherlands: National health policy Health Nearby, 2012-15</p> <p>Italy: National project for the promotion of physical activity base on the Ministry of Health policy Gaining health, 2007</p> <p>Romania: National program movement for health</p> <p>Romania: National program sport for all 3rd millennium Romania – a different lifestyle</p>	<p>HEPA, prevention, transport</p> <p>Denmark: Region of Zealand: The regional development strategy – Region of Zealand, 2012-2015</p> <p>Finland: Regional strategy of health related sport, Päijät-Häme 2009-2020, 2008</p> <p>Italy: Emilia-Romagna regional prevention plan 2010-2012</p> <p>Italy: Tuscany regional project Strade della salute (Ways to health) 2009-2011</p>	<p>Physical activity</p> <p>Denmark: The sports and physical activity policy of the Esbjerg municipality 2011-12</p> <p>Finland: City of Lahti health enhancing physical activity strategy 2007</p> <p>Italy: Municipaliadi local policy for sport promotion for young people in Rome 2011-12</p>
<p>Olympics</p> <p>United Kingdom: Places people play –delivering a mass participation sporting legacy from the 2012 Olympic and Paralympics games</p>		<p>Young people, physical activity, schools</p> <p>Netherlands: Youth on healthy weight (JOGG) 2010-2015</p> <p>Romania: The protocol of organizing sport activities for children in Cluj County</p>
<p>Walking and cycling</p> <p>Finland: National action plan for walking and cycling 2020, 2011</p>		<p>Health policy</p> <p>Denmark: Copenhagen City’s public health policy – long live Copenhagen 2011-14</p> <p>Denmark: The healthy policy of Odense municipality 2011</p> <p>Transport</p> <p>United Kingdom: Herefordshire local transport plan 2</p>

3.2. Analysing HEPA policy documents in REPOPA

HEPA policy document analysis detected and defined the use of research evidence in the HEPA policy documents e.g. content analysis of document themes were categorized and classified according to common questions. The main focus in the HEPA policy document analysis was the question of what constitutes research evidence and other kinds of evidence in HEPA policy making process. Research evidence is able to answer questions concerning health determinants and the efficacy, effectiveness, and efficiency of interventions, although in this analysis, other kinds of evidence were also sought. This other kind of evidence is seen to reflect contextually salient factors, such as culture, community and organizational values, resources and political priorities, which may define the usefulness of evidence for HEPA policy making and implementation (Dobrow, Goel, Upshur 2003, Skovgaard, Nielsen, Aro 2008).

The policy analysis used specific and common questions across countries. Themes for the document and interview analysis to look for use of research evidence and other kinds of evidence were the following:

- 1) HEPA policy development phase: extent of the use of research evidence and other types of evidence
 - a) Background information, contexts of policy making
 - b) Stakeholders and actors
 - c) Inter-sectorial cooperation and research evidence and other kinds of evidence
 - d) Triggers for HEPA policy making and the relation to research evidence and other kinds of evidence

- 2) Contents of HEPA policies and use of research evidence and other kinds of evidence
 - a) Subgroups, equity, ethics and research evidence and other kinds of evidence
 - b) Use of research evidence and other kinds of evidence in HEPA policy making
 - c) Accountability and research evidence and other kinds of evidence
 - d) Evaluation and research evidence and other kinds of evidence
 - e) Sustainability and research evidence and other kinds of evidence
 - f) Other emerging issues

3.2.1. Interviews of the main stakeholders of the chosen policies

A guideline for semi-structured interviews was developed for the interviewers and each interview adjusted questions in relation to information needs after policy analysis. In addition to the interview questions, an interviewee information sheet about REPOPA project and a consent form for interviewees were developed.

The purposeful sampling of interviewees was dependent on the chosen HEPA policy documents. Interviewees were selected among experts and specialists in the ministries, in administrative areas, including politicians and public sector officers, in research institutes, in associations and among other partners who have been involved in the preparation of the HEPA policy documents. Altogether 79 interviews were conducted in six countries. All interviews were audio-recorded if the interviewee gave his/her permission. If recording was not allowed, notes were taken. The interviewee completed the signed consent form prior to the interview.

Recorded interviews were transcribed in full. The transcripts were coded according to interview questions and supplemented with other issues as they emerged from the data. The interview data were processed using content analysis e.g. communication content of interviews was categorized and classified. First the data were broken down into parts that were conceptualized and finally rearranged into a new coherent text entity. At the same time, content analysis was used to classify, search for differences and similarities, and to summarize the information (Ritchie, Spencer 2002).

Ethical approval for the interviews was sought and received from national ethical boards, as applicable (Edwards et al. 2012). The REPOPA coordinator sent the ethics clearance documents to the EC project offices according to the requirements. All interviewees were asked to give informed consent and data were stored anonymously and codes kept in password-protected areas of data servers.

3.2.2. Discourse analysis of some HEPA policy documents

Discourse analysis was mentioned in the REPOPA Document of Work as an optional method of analysis for REPOPA project. Discourse analysis provides one of the key methods to understand the policy process (Smith et al. 2009).

Three partners carried out discourse analyses. The approach for the discourse analysis in the REPOPA study was based on Fairclough (1992), Freeman (2006) and Tervonen-Gonçalves (2012). On this basis, the frameworks of key questions were compiled to aid the analysis of each document in Finland, Italy and Romania.

Written texts formed an important part of this study. However, written texts are often under-analysed compared to research that focuses on interactions with people (or even interview-based analyses). Public policy statements, such as HEPA-related policy documents are a distinctive kind of text, which frame the nature of challenges in health, physical activity and evidence used for policy making as well as shape the boundaries of possible responses; they act as points of reference for a wide variety of actors to justify actions (Freeman 2006). As a result of authorship, policy documents are able to impose a particular kind of power through their words. What seems to be presented as facts within policy statements often represents policy decisions (or non-decisions) that may be based on implicit assumptions (Iannantuono, Eyles 1997). Therefore analysing policy documents and their texts reveals what these assumptions are and how they are likely to shape the way actors understand and respond to particular policy challenges.

4. Results

The main results of the REPOPA work package 1 - concerning the assessment of the needs, roles and use of research evidence in HEPA policy making and ways that the research evidence is combined and negotiated with other kind of evidence - are presented below. Reporting of the results starts with the main results on the use of research evidence and access to research information and continues with facilitators and barriers for the use of research evidence. Thereafter platforms for evidence-informed policy making for HEPA and the initial REPOPA framework and indicators are discussed. The main results of the analysis of HEPA policy documents and interviews are combined results of the six European REPOPA partner countries.

4.1. Use of evidence in HEPA policy making – knowledge and information sources

Based on the analysed interviews the use of information for the HEPA policies can be divided into three main categories of information used in HEPA policy making: research evidence, media, and the political base. The use of research evidence in the policies was published research, demographic data and country specific statistical data. Media-based information included the use of newsletters and the internet. The political basis for policies was based on societal and individual factors. The political basis seemed to play a bigger part in HEPA policy making as the policy making processes were political in the first place. For example, in some cases propositions did not get through without the political support of citizens and, alternatively, of government.

The **research evidence** that was mostly utilized was ad hoc research, epidemiological research, population studies or statistics and case studies. Peer-reviewed research articles, surveys or monitoring, evaluation and implementation studies were rarely used. Research evidence was considered irrelevant if used without any other type of evidence, as the main functions of the analysed HEPA policies was implementation, which required practical information about the concrete actions that need to be taken. However, research evidence was seen to offer, at least in some cases, stronger arguments for the justification of HEPA policies than other types of evidence. The issues behind HEPA policies were justified by research evidence, in some cases, by subgroups or the target groups.

The main criterion in the use of research evidence seemed to be a common sense filter: does the proposed solution make sense? Does it feel like it would work? This practical and hands-on approach can even be seen to provide stronger useful evidence than academic studies as one of our interviewees stated that “I’m confident enough to say that actually you’re unlikely to find a study that would show that based on the experience that we’ve had.” This implies that even if this respondent read such a study, he would be unlikely to believe it.

Experience-based knowledge was often used in HEPA policy making and included experts’ know-how and best practices from former experiences.

The HEPA policy making was often based on former strategies, programs, recommendations, guidelines, alignments, traditions, political support, trends, legislation or economics, which were partly due to the continuation of former policy processes. Seldom were lessons learnt from projects and interventions used in policy making. Moreover, individual and socially structured factors such as values, interests, common sense and inspiration influenced policy making.

The use of evidence was more often implicit than explicit in the policy documents analysed. The citations and references were used rarely and the evidence was filtered into the policy making process. The research evidence became common sense and was not explicitly cited. Key professionals were used as brokers to deliver knowledge or information to policy makers and in the delivery process; the knowledge or information became mixed according to the diverse needs of policy making.

When asking interviewees what kinds of evidence would be needed to support the policy making, the most important needs seemed to be related to information (e.g. epidemiological data) and good practices in the implementation processes (tools and guidelines) and current challenges relating for example to economics, cost efficiency and future trends. Information and knowledge was needed from the research community, implementation experts, and administrators. According to the interviewees the information and knowledge should be provided in short newsletters, other short publications and electronic national information banks and sources in the language of the policy makers.

The use of research evidence would be facilitated by increasing the time available for the policy process as well as the infrastructure and resources for public sector officers. Continuous relationships between public sector officers and researchers in research institutes would increase the use of research evidence in policy making. Finally, even though the research evidence would be easily accessible, the political priorities were seen as essential to policy making. This meant that the use of the research evidence appeared to be relegated to the level of justifying particular political needs and thus the use of evidence became highly selective.

4.2. Barriers and facilitators for the use of research evidence in HEPA policy making

Based on the analysis of the interviews, **facilitators** for the use of research evidence were divided into supporting features of administration, using media to communicate research evidence, facilitating accessibility to information, and creating joint goals for the use of research evidence. Facilitators for the use of research evidence and other types of evidence were the supporting culture for the use of research information in the public administration, competence and training of administration personnel, and financial situation of administrative entities. In addition, use of research evidence was facilitated by time allocation for the policy making processes and its various stages and monitoring of policy making in administration. Media facilitated use of research evidence by raising trends and daily issues for discussion before, during and after policy making by researchers. To facilitate use of research evidence, the sources of research evidence need to be accessible, easily available and in the language of policy makers to be used in policy making. In addition policy makers' information needs should be geared to relevant and integrated knowledge. One of the facilitators in the use of research evidence is the inclusion of economic perspective in relation to researched topics. Also research should be timely and knowledgeable about administration and its policy making processes.

One main facilitator for the use of research evidence was the relationships between policy makers, various networks, research infrastructures and researchers. Use of research evidence was facilitated by personal relationships and joint projects with researchers across sectors as well as through open forums, such as conferences, seminars and discussions. In addition, the use of research evidence was facilitated by continuous monitoring of health data and getting researchers into the policy making processes.

Facilitators to the use of research evidence depended on the nature of the policy making, a sufficient number of joint criteria for the use of research evidence and resources (financial and human). The use of research evidence was facilitated by research and cooperation interests between policy makers and researchers, but also by the simultaneity of the research work during the policy making process. In the policy making process the political will to use research evidence depended on the priorities laid down by voters to research evidence e.g. appreciation of universities and research institutes and the values given to research evidence. If joint criteria for the use of research evidence were found in the policy making process, encouragement from management was important for the use of research evidence, as was data collection and its interpretation. Individual and socially created interests played a role in defining the joint criteria for using research evidence; these were based on interests, traditions in the use of research evidence, and background information needed for the policy process. The use of research evidence in terms of accessing various databases requires resources, using different competences of researchers, and having the time.

Barriers to the use of research evidence included that research did not fit the needs of the policy process or to implementing the research evidence into policy. Additional barriers included the effects of adopting research evidence into policy and also economic concerns, as well as a lack of cooperation and the lack of joint activities with researchers. The timing of the use of research evidence was very important in relation to policy making. The concurrence of research and policy making improved the use of research evidence, as did daily working with researches, having access to publications and attending seminars.

4.2.1. Needs of policy makers

The type of evidence and information used differed between the public sector officers; it depended on their interests, work related traditions and educational and professional backgrounds. The main need expressed was that the use of research evidence was timely in relation to the policy making process. Often policy makers faced situations where applicable research evidence was not available and did not relate to the impact, context or competing interests of politicians and researchers. According to the interviews, the research institutes and policy makers could benefit from collaboration from the beginning of the policy-making process. Also research findings were often found to be difficult to apply in real-life situations, which also brought into question the balance between research evidence and other types of evidence, such as best practices and knowledge on 'what works' in different contexts. Further, political will and research evidence may not complement each other and thus do not provide a basis for compromise, meaning that research evidence might not be utilized.

According to the interviews, the preferred information channels were newsletters and different publications from various national and regional organizations, institutions and networks. Other important information channels mentioned were direct communication with different professionals, hearings of partners, conferences and seminars on various topics. Nevertheless, public administration connected to HEPA often had to trust that the evidence they had access to, was up-to-date. The results did not show a real expressed need for developing skills, providing resources for information search, for using research evidence or providing easy access to research knowledge.

4.2.2. Networks, collaboration and partnerships for knowledge generation and gathering

The infrastructures for knowledge exchange were described by each partner country through a stakeholder analysis and complemented by information received in the interviews. In HEPA policy making, knowledge

exchange should be cross-sectorial and between various interrelated national, regional and local administrative and research entities. The knowledge exchange infrastructure seemed to be based on ad-hoc needs and the formal knowledge-exchange structures seemed to be sporadic. At present stage it is possible to give examples of infrastructure of knowledge exchange from Denmark and The Netherlands.

In Denmark knowledge exchange infrastructure includes research institutions, the Danish Health and Medicines Authority, the Danish Institute for Sports Studies and the Danish Society for Public Health. They provide research evidence on HEPA to the national, regional and local governmental authorities, as well as to other associations and actors related to physical activity. However, there is no formal forum for knowledge exchange across stakeholders, and no structures have been established by which stakeholders can validate their recommendations by expert committees or provide shared recommendations to policy makers. A policy oriented national platform for knowledge exchange is currently under establishment in Denmark facilitated by the Danish REPOPA team.

In The Netherlands national public health policy is structured and supported by a 4-year prevention cycle as is laid down in the Dutch Public Health Act. The processes and outcomes of this prevention cycle are evaluated and monitored by the Dutch Health Inspectorate (IGZ). Next the Public health status and forecast report (VTV) with all relevant research evidence is written by the National Institute on Health and the Environment (RIVM). Departments of the Ministry of Health write the national policy document and municipalities write local policy documents based on the national policy document followed by the implementation of the local health policy. After that, the cycle starts again with the monitoring and evaluation through the Inspectorate. Relevant research evidence comes from the Central Bureau of Statistics (CBS) and The Netherlands Organization for Health Research and Development (ZonMw). Knowledge and useful information for policy development come about through these institutes which are acting upon instructions of the Ministry of Health, Welfare and Sports. The research infrastructure in public health on the local and regional level is supported by the regional and municipal health services. They monitor the health status on regional and local level. The use of evidence is hindered at the level of monitoring the data especially at the local level (municipalities, neighbourhoods) and between services such as health monitoring data and data from hospitals and primary care.

The interviewees expressed the need for collaboration and for creating a system of evidence-informed reporting; collaboration was particularly emphasized with research institutions, which would give access to new knowledge and a faster transfer of research findings to improve health. Increased cooperation and collaboration with similar projects was also seen as beneficial, as was testing interventions jointly in municipalities and cooperating over HEPA at the grass-roots level. Such efforts were anticipated to increase understanding of the systematic use of evidence-informed working methods. Interviewees mentioned that there is a need to elaborate on the working methods e.g. to avoid top-down approaches and to include practitioners in the use of research evidence. Knowledge and information needs could be increased by creating national "centres for municipal research" with the focus on municipal interventions and projects. In addition, there is a need to improve documentation of interventions and explanations of causal chains for successes and failures of interventions. Various platforms were also suggested to solve and find partners to work out solutions. Suggestions were made for more collaboration with local universities and for establishing think tanks to facilitate knowledge exchange between practice and research-professionals. The need to establish national information banks, data sources and good practices available via internet

was apparent, in addition to more networks for professionals and other stakeholders to share research evidence. Ease of access to knowledge and information should be promoted and the balance between formal and informal relations for consultations, discussions and knowledge exchange needs to be considered.

5. Platforms for knowledge exchange for HEPA

One of the aims of the REPOPA is to form national platforms for evidence-informed policy making for HEPA. Based on the REPOPA work package 6 contributions, the development of the platform offered two eligible scenarios to the Consortium partners. Each partner was able to choose between a) search for an in-country work group or task force that has an interest in evidence informed policy making to enhance physical activity and to join that group representing REPOPA, having at least 12 months continuity as members of the work group or task force or b) to develop an in-country working group, outside the REPOPA in-country team members, with an interest in evidence informed policy making to enhance physical activity. Both above mentioned actions could be local, regional and national and should be developed during the REPOPA project duration. The overall scope of the in-country platforms and networks is to increase the usability of evidence in policy-making process, having the REPOPA project as a promoter and supporter. Therefore, the aim is to bring together professionals and create several discussion meetings and working sessions having common vision and goals that may also evolve during the developed network.

The THL, lead of the WP1, is part of a national platform for health enhancing physical activity policy, contributing through a working group on information access to physical activity related information coordinated by the Finnish Ministry of Education and Culture. They have meetings every other month until May 2013 to discuss the importance of having specific health enhancing physical activity policies, as well as how evidence can be translated into policies and practice. Other countries will form platforms as their work packages progress and set up their processes during 2013-2016 as part of the WP6 main activities. As THL is a leader in the identification of needs, roles and the use of evidence in HEPA policy making, it was found useful to participate in a working group (April 2012) on access to information on physical activity that was offered by the Ministry of Education and Culture, Finland. The working group consisted of invited participants and representatives from universities, The Youth Research Society, sport and physical activity organizations, Finnish Society of Sports Sciences and regional administration. Discussions were held on the use of research evidence and other information in policy making for physical activity in Finland. The working group was led by the Ministry of Education and Culture.

As an example of these kinds of platforms, the tasks of the Finnish working group are described here: 1) Map the use of research evidence and other types of evidence in HEPA policy making and the level and quality of information used in policy making; 2) Define the role of stakeholders in policy making and decision-making from the point of view of using research evidence; 3) Make proposals and suggestions to improve interaction and needed actions for further use of research evidence in policy making; 4) Make proposals and suggestions for improving and renewing the current practices and roles of various stakeholders; 5) Search for possibilities to improve access to research and other information concerning physical activity and facilitate this through information and communication technology.

The working group participated in two hearings: use of research evidence and other information in decision-making and policy making and the renewal of legislation governing physical activity. The working

group participated also in round table discussions, adjunct research and development projects as interviewees and commentators, and in a national seminar on Physical Activity Policy. The working group invited experts to give presentations on the use of research evidence in physical activity policies (REPOPA); the architecture of information and communication technology for information dissemination; and also communication and information dissemination in regard to sport and physical activity science. The final report of the working group and its conclusions and recommendations was published June 10, 2013 by the Finnish Ministry of Education and Culture (Finnish Ministry of Education and Culture 2013).

In June, an application of the establishment of an interest group within the Danish Society of Public Health has been sent by the Danish REPOPA team, who will facilitate a sustainable coordination and management of the interest group as a platform for knowledge exchange. This interest group aims to exchange knowledge on evidence-informed public health policy making and practice, with an outset of the REPOPA results.

6. Preliminary REPOPA framework and indicators

6.1. REPOPA framework

The policy analysis and interview results, complemented by a new literature review since the REPOPA Document of Work was written, confirmed the relevance of the preliminary REPOPA framework and indicators. The framework for the intersection of public health decision making (Satterfield et al 2009), which describes the overlapping circles of best available research evidence, environmental and organizational context, resources, including practitioner/policy maker expertise and contextual characteristics such as population, its needs, values and preferences, seems to be well-fitting for the REPOPA work. In line with this, a health promotion evidence paradigm (Aro et al 2008, Skovgaard et al 2008, Edwards and Di Ruggiero 2011) that helps assess salient contextual factors and challenges for policy implementation was supported by the WP 1 results.

The Knowledge-to-Action (KTA) Cycle (Straus et al 2008), also described in the REPOPA Document of Work, also turned out to provide a viable model for the analysis of and later interventions on evidence-informed policy making. Building on the research knowledge synthesis, providing locally relevant knowledge and assessing facilitators and barriers of knowledge integration and working towards tailored interventions were all enforced by the results. Further, in the course of REPOPA, Edwards (2012) developed a revised version for CIHR's (Canadian Institutes of Health Research) Institute of Population and Public Health (IPPH) of Graham et al.'s (2006) original Knowledge-to-Action Framework (original framework: <http://www.cihr-irsc.gc.ca/e/39033.html>). The revised version includes scalability of knowledge, intersectoral collaboration, implementation systems, economic analyses, equity and ethics considerations. These elements (except implementation systems due to the scope of work package 1) were also covered in the work package 1 results, and seem to be relevant for further research such as REPOPA interventions in work package 1 and work package 2.

In addition, as systems approach (Best, Holmes 2010) shortly described in the REPOPA Document of Work suggests, European physical activity policy making seems to benefit from the non-linear, complex systems perspective, which allows unpredictable changes but also helps to better understand policy processes.

The future REPOPA work will aim to make a synthesis of the above models and pursue a combination of them to describe evidence-informed physical activity policy making in Europe.

6.2. REPOPA indicators

The aim of developing preliminary REPOPA indicators based on work package 1 results is to suggest a usable method for evaluating the process of developing and implementing policies rather than establishing the status of policies. Hence, the proposed indicators identify possible areas for improvement in integrating research evidence into real-life policy making. They also provide input for the other work packages of REPOPA. The indicators will be further developed during the REPOPA project and a final set of tested and validated indicators will be published when the REPOPA project ends. The list below gives an idea of the types of indicators to be tested and refined in the REPOPA project.

- 1) Is the best available research evidence taken into account?

- If so, is it based on an evidence hierarchy (systematic review, evidence synthesis, article synopses, randomized controlled trials, cohort studies, case-control studies, etc.): yes/no; please specify
- 2) Is research evidence integrated with contextual needs?
 - Yes/no. If yes, what kind of contextual needs e.g. feasibility, political priorities, resources, population characteristics etc. are taken into account?
 - 3) Are relevant stakeholders involved?
 - Yes/no. If yes, which stakeholders and how are stakeholders involved? And to what degree is the research community represented?
 - 4) Have all relevant sectors been identified and involved in the policy development and implementation?
 - Yes/no. If yes, which sectors?
 - 5) Are equity issues taken into account in the policy making process?
 - Yes/no. If yes, how is equity taken into account? (E.g. inclusion of those whom the policy concerns, consideration of possible special needs for vulnerable or ethnic minority groups in terms of access to physical activity facilities)
 - 6) Is policy evaluation and/or policy impact assessment in place?
 - Evaluation: outcome, process, context evaluation. Yes/no: please specify
 - Impact: health impact, environmental impact, social impact. Yes/no: please specify.
 - 7) Is a systems approach taken into account, meaning that policy development can be non-linear, with inter-dependences between levels, triggered by e.g. media events, negotiated interests and communication? Yes/no, please specify.
 - 8) Are supporting structures (evidence platforms, working groups, and networks) and knowledge dissemination of evidence-informed policy making in place/built/encouraged? Yes/no. Please specify.

The future REPOPA work will test and refine the indicators and will suggest empirically tested and validated set of indicators for evidence-informed physical activity policy making in Europe.

6.3. Methodological note

Strengths: Six EU member states plus evaluation expertise from Canada; multi-disciplinary research group including representatives from universities, sector institutes and implementation institutes; wide range of policy documents and interviews included in the analysis; comprehensive definition of research evidence; rich and exploratory study for how and what types of evidence is used in integrated health policy; attention

paid to other sources of evidence and political needs and use of evidence in the policy making process; in addition to the research evidence, other types of information are very important in policy making.

Limitations: In this kind of study using qualitative methods for various different policies, comparison of results across contexts and countries is not possible; further, at this early phase of REPOPA and due to data gathered in different contexts and languages, understanding and determining comparability of certain concepts is a challenge. However, the REPOPA project continues to clarify and harmonize the terms and concepts used for evidence-informed policy making e.g. by developing a glossary for evidence-informed policy making.

6.4. European added value

This study with six European countries provides an informative basis for understanding evidence-informed policy making in a wide range of cultural settings, which also differ in their experiences and also in their readiness to integrate research evidence with policy making in the area of physical activity.

7. Conclusions

The objective of the work package 1 in the REPOPA project was to assess the needs, role and use of research evidence in HEPA policy making and possible ways of knowledge exchange. In addition, this study analysed how research evidence is being combined and negotiated with other kinds of evidence in HEPA policy making. Moreover, the barriers and facilitators for the use of research evidence were explored. All these questions were analysed using the 19 HEPA policy documents and the 79 interviews with the key stakeholders from six European REPOPA partner countries.

Objective 1: Ways evidence is used in formulating the local/regional and national policies to enhance physical activity

Summary of the findings

The analysed HEPA policies were context-dependent and therefore varied due to a country's culture, history, economy, and politics.

Also stakeholders in the six countries varied and their contributions to the HEPA policies varied from a systematic approach to integrating research evidence and other kinds of evidence (e.g. stakeholder opinions) to a sporadic or ad hoc approach to integrate research evidence and other kind of evidence in the policy making process. Overall, peer-reviewed research was rarely used or referenced. When it was used, mostly ad hoc research and epidemiological research was used. Instead, former strategies/ programs, recommendations, traditions, political support, trends, legislation or economical information were used.

Experience-based information was often used in HEPA policy making and included expert know-how as well as best practices from former experiences. Socially and contextually formed individual factors such as values, interests, common sense and inspiration played a part in the policy making. All in all, often the evidence used was implicit.

Conclusion No 1: Evidence integration by combining research evidence with expert know-how and contextual needs seems to happen in the recent policies in the six EC countries involved. It looks that the inclusion of best available research, using references indicating the source, could be further increased and developed; further, making implicit evidence use explicit in all kinds of evidence used in policy making, would increase transparency.

Objectives 2-3: Needs of policy makers (facilitators and barriers) in evidence use and ways of communicating evidence to the policy makers

Summary of the findings

The central **facilitators** for the use of research evidence in policy making found were: support of administration in terms of competences, financial, managerial and time resources; access to applicable research, information, media, personal relationships and networks between researchers and policy makers, and joint goals for the use of research evidence. In addition, the use of research evidence was promoted by a common language between researchers and policy makers, continuous monitoring of health and other data sources and including research persons in policy making processes.

The main **barrier** to the use of research evidence in policy making was limited time available in the policy making process. Often policy makers faced situations when relevant research evidence was not available in relation to the impact, context or competing interests of politicians and researchers. Further, barriers found included unpredictable and non-linear nature of the policy making, insufficient number of joint criteria for the use of research evidence, lack of resources (financial and human), different or lacking research and collaboration interests, as well as on the lack of simultaneity of research work during the policy making process. Also in the policy making process, the political will to use research evidence depended on the priorities laid down by voters and the values given to research evidence e.g. support to finance the major research contributors, such as universities and research institutes. The type of evidence used differed between public sector officers, which further depended on their interests, work-related traditions and educational and professional backgrounds.

Conclusion No 2: Evidence-informed policy making could be strengthened by creating a supporting organizational culture, access to research knowledge and providing economic resources, developing competences, creative use of media and importantly, enhancing formation of relationships and networks between researchers and policy makers by organizing working groups, seminars and forums, commissioning research and evaluation work. Further, researchers and research institutes could focus more on interaction with policy makers and provide research evidence in an applicable form and with understandable, concise and clear language. To overcome the central barriers found, the research community could try to provide salient and applicable research evidence in a timelier manner to policy makers (assuming publication interests are not harmed); further, more research and development work is needed to genuinely integrate research knowledge and on the other hand, political interests. This could probably be enhanced by longer-term collaboration based on local priorities between those who carry out research and those who develop policies. This approach would also help to overcome the lack of simultaneity of research work during the policy making process.

Objective 4: REPOPA framework and indicators

Summary of the findings

The chosen **REPOPA framework** for evidence-informed policy making based on combining best available research evidence with the population characteristics, needs, values and preferences and people's experiences and circumstances (Satterfield et al 2009), seemed to provide a functioning model for conceptualizing the cross-sector and multiple-stakeholder-based evidence-informed decision-making. The results indicate the need for longer-term collaboration between researchers and policy makers to learn the traditions, conditions, values as well as resources of each other, are in line with the Knowledge-to-Action framework chosen for the study. Further, the unpredictable nature of policy making exemplifies a systems approach, which was one of the frameworks REPOPA was built upon.

The preliminary **REPOPA indicators** for evidence-informed policy making suggest a usable method for evaluating the process of developing and implementing policies. Indicators are meant to identify possible areas for monitoring and improvement in integrating research evidence into HEPA policy making. At this point, based on the literature and work package 1 work, the Consortium has found eight topics (use of research evidence, contextual needs, stakeholder involvement, multiple sectors inclusion, equity, evaluation, systems approach, supporting structures) to develop indicators, and the Consortium will

continue to further develop their measurement scale, refine them and complement the preliminary list of indicators in the REPOPA project until 2016.

Conclusion No 3: The REPOPA framework and indicators provide promising and feasible model, concepts and tools to monitor and further develop evidence-informed policy making.

Objective 5: Evidence-informed policy making platforms

Summary of the findings:

In order to evaluate the usability of existing infrastructures of knowledge exchange and furthermore, to facilitate and enhance sustainability in evidence-informed policy making, the Consortium has started to join or if needed, establish platforms for cross-sector evidence-informed policy making in all participating countries. In Finland, the REPOPA partner there participated in a working group which facilitates access to information on physical activity within the Ministry of Education and Culture. Other REPOPA countries are either in a similar process or planning it e.g. an interest group within the Danish Society of Public Health has been applied for.

Conclusion No 4: Creating or joining national inter-organizational platforms or working groups brings sustainability beyond the REPOPA project time frame for the integration of research knowledge and policy making.

Objective 6: Implications for other work packages in REPOPA

Summary of the findings:

These findings provide an informative basis for the intervention work packages, No2 and No3. First, they confirmed the relevance of the draft REPOPA framework and indicators as tools for the further work. Second, the country-specific findings can directly be applied to tailor the planned interventions in the four intervention countries of Denmark, Italy, the Netherlands and Romania. Examples of these country-specific findings are: background information such as research evidence used, details of the policy processes, relevant sectors and key stakeholders, main facilitators and barriers in evidence-informed policy making, context analysis, existing infrastructures of knowledge exchange, links between policy makers and researchers, awareness and competences among policy makers and other stakeholders.

For other work packages (No4 and No6) these results provide mapping of infrastructure and networks for physical activity policy making, information on the communication needs related to research evidence, and existing competences in evidence-informed policy making. Work package 4 can start to prepare its Delphi process based on this information and work package 6 can continue its work e.g. on evidence brief development as well as country-specific platform and evidence informed policy making infrastructure support.

Conclusion No 5: The other work packages can use the results of WP 1 to develop resources for evidence-informed physical activity policy making, planning interventions, and disseminating REPOPA findings.

References

1. Aro AR, Smith J, Dekker J. Contextual evidence in clinical medicine and health promotion. *European Journal of Public Health*. 2008. 18(6).
2. Bell E. *Research for health policy*. Oxford University Press. New York. 2010.
3. Best A, Holmes B. Systems thinking, knowledge and action: towards better models and methods. *Journal of Research, debate and practice*. 2010. 6 (2).
4. Bornstein DB, Pate RR, Pratt M. A review of the national physical activity plans of six countries. *Journal of Physical Activity and Health*. 2009. 6(Supplement 2), S245-S264.
5. Bowen S, Zwi AB. Pathways to "Evidence-Informed" Policy and Practice: A Framework for Action. *PLoS Medicine* 2005;2(7):e166.
6. Bryman A, Burgess RG. *Analysing qualitative data*. Taylor & Francis e-Library. 2002.
7. Bull FC, Bellew B, Schöppe S, Bauman AE. Developments in National Physical Activity Policy: an international review and recommendations towards better practice. *Journal of Science and Medicine in Sport* 2004;7(1):93-104.
8. Bunton R, Nettleton S, Burrows R. (eds). 1996. *The sociology of health promotion*. London. Routledge.
9. Caspersen CJ, Powell KE, Christenson GM. Physical activity, exercise and physical fitness: definitions and distinctions for health-related research. *Public Health Rep*. 1985; 100: 126-31
10. Cavill N, Kahlmeier S, Racioppi F. *Physical activity and health in Europe: evidence for action*. WHO. 2006.
11. Cavill N, Foster C, Oja P, Martin BW. 2006. An evidence-based approach to physical activity promotion and policy development in Europe: contrasting case studies. *Promotion & education* 13 (2), 104-111.
12. Daugbjerg SB, Kahlmeier S, Racioppi F, Martin-Diener E, Martin B, Oja P, Bull F. 2009. Promotion of Physical Activity in the European Region: Content Analysis of 27 National Policy Documents. *Journal of Physical Activity and Health* 6, 805-817.
13. Dobrow MJ, Goel V, Upshur REG. Evidence-based health policy: context and utilization. *Social Science & Medicine*. 2004 (58). 207–217.
14. Duncan S. Towards evidence-inspired policy making. *Social Sciences* 2005;61:10-11.
15. Edwards, N. (2012). Advancing knowledge translation: Opportunities for mutual learning between Canada and the United States. Presentation to National Cancer Institute, Bethesda, Maryland.
16. Edwards N & Di Ruggiero E. Exploring which context matters in the study of health inequities and their mitigation. *Scandinavian Journal of Public Health*, 39(SUPPL. 6), 43-49.
17. Edwards N, Viehbeck S, Hämäläinen R, Rus D, Skovgaard T, van de Goor I, et al. Challenges of ethical clearance in international health policy and social sciences research: experiences and recommendations from a multi-country research programme. *Public Health Reviews*. 2012;34(1):1-18.
18. Fairclough N. *Discourse and Text: Linguistic Intertextual Analysis within Discourse Analysis*. *Discourse and Society* 1992;3(2):193-217.
19. Foster C. *Guidelines for health-enhancing physical activity promotion programmes*. British Heart Foundation Health Promotion Research Group. University of Oxford 1996; The UKK Institute for Health Promotion Research. 2000. 1996; 2000.
20. Freeman R. The work the document does: research, policy and equity in health. *Journal of health politics, policy and law* 2006;31(1).

21. Graham ID, Logan J, Harrison MB. Straus SE, Tetroe J, Caswell W, Robinson N. Lost in Knowledge Translation: Time For A Map? *J Contin Educ Health Prof* 2006; 26(1): 13
22. Haas E. When knowledge is power: three models of change in international organizations. Berkeley. University of California Press. 1990.
23. Haas PM. Knowledge, Power, and International Policy Coordination. *International Organization* 1992; 46(1).
24. Ham C. Analysis of health policy-principles and practice. *Scandinavian Journal of Social Medicine*. 1990 (Supplement 46).
25. Health promotion glossary. WHO/HPR/HEP/98.1. WHO. 1998.
26. Head BW. Three Lenses of Evidence-Based Policy. *The Australian Journal of Public Administration*. 2008; 67(1).
27. Iannantuono A, Eyles J. Meanings of policy: a textual analysis of Canada's 'achieving Health for All' document. *Social Science and Medicine* 1997;44(11).
28. Kingdon JW. *Agendas, alternatives and public policies*: Glenview: Scott, Foresman. 1984.
29. Kothari A, Edwards N, Hamel N, Judd M. Is research working for you? Validating a tool to examine the capacity of health organizations to use research. *Implement Sci*. 2009; 4 (46).
30. John P. *Analysing public policy*. London: Pinter publisher. 1999.
31. Lavis JN, Ross SE, Hurley JE. Examining the role of health services research in public policymaking. *The Milbank Quarterly*. 2002; 80 (1).
32. Lavis J, Davies H, Oxman A, Denis J, Golder-Biddle K, Ferlie E. Towards systematic reviews that inform health care management and policy making. *Journal of Health Services Research and Policy* 2005;10.
33. Lavis JN. How Can We Support the Use of Systematic Reviews in Policymaking? *PLoS Medicine* 2009;6(11):e1000141.
34. Lavis JN, Robertson D, Woodside JM, McLeod CB, Abelson J. How Can Research Organizations More Effectively Transfer Research Knowledge to Decision Makers? *Milbank Quarterly*. 2003: 81 (2), 221-248.
35. Lengerke T, Rutten A, Vinck J, Abel T, Kannas L, Lüschen G, Rodriguez Diaz JA, Van der Zee J. 2004. Research utilization and the impact of health promotion policy. *Social and Preventive Medicine* 2004, 49, 185-97.
36. Lin V, Gibson B. *Evidence-based Health Policy: Problems and Possibilities*. Oxford: Oxford University Press. 2003.
37. Lomas J, Fulop N, Gagnon D, Allen P. On Being a Good Listener: Setting Priorities for Applied Health Services Research. *Milbank Quarterly*. 2003. 81 (3).
38. Lomas J. Connecting research and policy. In *Improving Research Dissemination and Uptake in the Health Sector: Beyond the Sound of One Hand Clapping* . Policy Commentary Series. ed.: the Centre for Health Economics & Policy Analysis at McMaster University, Hamilton, Canada. 2000.
39. Manson J, Greenland P, LcCroix A, Stefanick M, Mouton C, Oberman A, et al. Walking compared with vigorous exercise for the prevention of cardiovascular events in women. *New England Journal of Medicine* 2002(347):710-725.
40. Marsh D, Smith M. Understanding policy networks: towards dialectical approach. *Political Studies* 2000;48(1):4-21.
41. Marsh D, Rhodes RAW (eds.). *Policy networks in British government*. Oxford, GB, Clarendon Press. 1992.

42. Mays N, Pope C. Qualitative research in health care. Assessing quality in qualitative research. *BMJ* 2000; 320:50–2
43. McCaughey D, Bruning NS. Rationality versus Reality: The Challenges of Evidence-Based Decision-making for Health Policy Makers. *Implementation Science* 2010;5(29).
44. Milio N. Making healthy public policy; developing the science by learning the art: an ecological framework for policy studies. *Health promotion international* 1987;2(3).
45. Moore G, Redman S, Haines M, Todd A. What works to increase the use of research in population health policy and programmes: a review. *Evidence and Policy* 2011;7(3):277-305.
46. Nutley SM, Walter I, Davies HTO. Using evidence: how research can inform public services. Bristol: The Policy Press. 2007.
47. Oja P, Borms J. Health enhancing physical activity. Oxford. UK: Meyer & Meyer Sport.; 2004.
48. Orton L, Lloyd-Williams F, Taylor-Robinson D, O'Flaherty M, Capewell S. The Use of Research Evidence in Public Health Decision Making Processes: Systematic Review. *PLoS ONE*. 2011; 6(7).
49. Finnish Ministry of Education and Culture. Liikuntatiedon saavutettavuuden kehittäminen. Liikuntatiedon saavutettavuuden kehittämishanke –työryhmä. 2013:4 (In Finnish; published 12-06-2013)http://www.minedu.fi/OPM/Julkaisut/2013/Liikuntatiedon_saavutettavuuden_kehittaminen.html?lang=fi, accessed on June 13, 2013.
50. Petticrew M, Whitehead M, Macintyre SJ, Graham H, Egan M. Evidence for public health policy on inequalities: 1: The reality according to policymakers. *Journal of Epidemiology and Community Health* 2004;58:811-816.
51. Pope C, Mays N, Popay J. Informing policy making and management in healthcare: the place for synthesis. *Health Care Policy* 2006;1 (2).
52. Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *BMJ* 2000;320:114-116.
53. Portney KE. Approaching public policy analysis: An introduction to policy and program research. Englewood Cliffs, NJ: Prentice-Hall; 1986.
54. Regehr C, Stern S, Shlonsky A. Operationalizing evidence-based practice: The development of an institute for evidence-based social work. *Research on Social Work Practice* 2007; 17(3):408–16.
55. Ritchie J, Spencer SL. Qualitative data analysis for applied policy research. In Bryman A, Burgess RG, editors. *Analysing qualitative data: Taylor & Francis e-Library*; 2002.
56. Sabatier PA, Jenkins-Smith HC. Policy change and learning : an advocacy coalition approach. 1993.
57. Satterfield JM, Spring B, Brownson RC, Mullen EJ, Newhouse RP, Walker BB, Whitlock EP. *The Milbank Quarterly*. Vol. 87. No. 2. 2009.
58. Schöppe S, Bauman AE, Bull FCL, Weston EJS. National Physical Activity Policies. *Public Health Forum* 2003;11(41):31-32.
59. Shine KT, Bartley B. Whose evidence base? The dynamic effects of ownership, receptivity and values on collaborative evidence-informed policy making. *Evidence & Policy*. Vol 7. No 4. 2011.
60. Sjöström M, Oja P, Hagströmer M, Smith BJ, Bauman A. Health-enhancing physical activity across European Union countries: the Eurobarometer study. *Journal of Public Health* 2006;14: 291-300.
61. Smith KE, Hunter DJ, Blackman T, Elliot E, Greene a, Harrington BE, Marks L, McKee L, Williams GH. Divergence or convergence? Health inequalities and policy in a devolved Britain. *Critical Social Policy*. 2009;29(216).
62. Smith KE, Joyce KE. Capturing complex realities: understanding efforts to achieve evidence based policy and practice in public health. *Evidence and Policy* 2012;8(1).

63. Strauss AL, Corbin JM. Basics of qualitative research. London: Sage; 1998.
64. Straus SE, Holroyd-Leduc J. Knowledge-to-action cycle. *Evid Based Med*. 2008;13(4):98-100.
65. Straus SE, Tetroe J, Graham ID. Knowledge Translation in Health Care. Moving from Evidence to Practice. Wiley-Blackwell. BMJI Books. 2009.
66. Tervonen-Gonçalves L. From averages to best performers: use of comparisons in identity formation. *Critical Policy Studies*. 2012. (6) 3.
67. Walker W, Harremoes P, Rotmans J et al. Defining uncertainty: a conceptual basis for uncertainty management in model-based decision support. *Integ Ass* 2003; 4 (1).
68. Walt G. Health policy: an introduction to process and power. London: Zed Books; 1996.
69. Walter I, Nutley S, Davis H. What works to promote evidence-based practice? Evidence, policy and practice: developing collaborative approaches in Scotland. *Evidence and Policy* 2005;1(3).
70. Young K, Ashby D, Boaz A, Grayson L. Social science and the evidence-based policy movement. *Social Policy and Society* 2002;1(3).
71. Skovgaard T, Nielsen M-B, Aro AR. Evidence in Health Promotion and Disease Prevention. Danish National Board of Health. 2008.
72. Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT, et al. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *Lancet*. 2012;380(9838):219-29. Epub 2012/07/24.
73. Heath GW, Parra DC, Sarmiento OL, Andersen LB, Owen N, Goenka S, et al. Evidence-based intervention in physical activity: lessons from around the world. *Lancet*. 2012;380(9838):272-81. Epub 2012/07/24.