Multi-sector policy action to create activity-friendly environments for children: A multiple-case study

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ABSTRACT

Objectives: The aim of this study is (1) to gain insight into current multi-sector policy initiatives that contribute to activity-friendly environments for children in four Dutch municipalities, (2) to investigate the role of multi-sector collaboration in multi-sector policy action and (3) to gain insight into critical facilitators and possible challenges for multi-sector policy action aimed at creating activity-friendly environments for children.

Methods: A policy analysis was conducted in four Dutch municipalities by means of semi-structured interviews with 25 policy officers from different policy sectors. Interviews were transcribed ad verbatim and analyzed using qualitative data coding software.

Results: Each policy sector carried out policy measures related to (the environmental determinants of) physical activity among children, but most respondents were not aware of the potential effectiveness of their policy measures regarding this topic. In two municipalities structural collaboration between policy sectors was present, but the number of sectors involved was limited. Awareness and support among all policy sectors, a stimulating political environment, and knowing each other and being informed about other sectors’ policies were mentioned as facilitators for multi-sector policy action. The main challenge for multi-sector policy action was lack of time and resources.

Conclusions: This study shows that multi-sector policy action aimed at activity-friendly environments could be stimulated by raising awareness and defining problem ownership, enhancing multi-sector collaboration and paying attention to facilitators and challenges.

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1. Background

Lack of physical activity among children is a serious problem in many affluent countries and has several unfavorable health consequences such as an increased risk of development of overweight and obesity, cardiovascular disease, hypertension, diabetes, psychosocial problems and a poor development of motor skills [1–3]. Nowadays, there is growing attention for the role of environmental characteristics in determining children’s physical activity level. Next to individual characteristics, physical and social envi-
Environments such as access to recreational facilities, traffic situation, social safety and social cohesion are suggested to be related to children’s physical activity behavior such as outdoor play, sports participation or active commuting to school [4–7]. Creating environments that are attractive and stimulating for children to be physically active, in other words creating “activity-friendly environments” is seen as a promising strategy to stimulate an active life style among children [7].

In their report on promotion of active living in urban environments, the European division of the World Health Organization highlights the role of local governments in creating activity-friendly environments [8]. Furthermore, policy measures from policy sectors outside the public health domain, for example the policy sectors spatial planning, traffic and transportation, safety and social affairs, are warranted to create activity-friendly environments for children [9–11]. Recently, several Dutch advisory boards conclude that there is a large potential health gain, if national and local governments adopt a multi-sector approach in tackling health problems such as physical inactivity [12].

Nevertheless, Dutch semi-scientific (grey) literature indicates that multi-sector health policy initiatives (sometimes referred to as health in all policies) at the local level are limited and local policy makers may experience various barriers for conducting multi-sector policies [13,14]. A possible and promising strategy to promote multi-sector policy action is by stimulating multi-sector collaboration [15,16]. Empirical research addressing multi-sector policy action (including multi-sector collaboration), however, is scarce and facilitators and challenges for multi-sector policy action at the municipal level are poorly documented. Therefore the aim of this study is threefold:

- To gain insight into current multi-sector policy initiatives that contribute to activity-friendly environments for children in four Dutch municipalities.
- To investigate the role of multi-sector collaboration in multi-sector policy action.
- To gain insight into critical facilitators and possible challenges for multi-sector policy action aimed at creating activity-friendly environments for children.

2. Methods

Complex organizational phenomena, such as multi-sector policy action, are best studied with qualitative research methods, especially when the research field is still in its infancy and no clear cut hypotheses are available in advance [17]. Case study research is particularly suitable, because it pays attention to the contemporary and contextual conditions in relation to the topic under research [18].

2.1. Case selection

The cities selected for this study were participating in a large scale research project described in more detail elsewhere [19]. At the start of this project in October 2006, five municipalities were approached by letter for participation in the project and were given more detailed information during a personal meeting. The municipalities were chosen from the service domain of the Regional Public Health Services associated with the Academic Collaborative Centre Public Health of Tilburg University. Due to lack of time and lack of interest in the topic, one municipality decided not to participate. Hence, the research project was conducted in four medium-sized cities in The Netherlands (to guarantee complete anonymity of the respondents in the study, city names are blinded throughout the text). Table 1 summarizes the main characteristics of the cities that were enrolled. Despite the fact that one municipality (municipality D) is somewhat smaller compared to the other three municipalities, the four municipalities show much resemblance regarding the composition of their population. In each municipality, six policy sectors (public health, sports, youth and education, spatial planning/public space, traffic and transportation, and safety) were included in the study because of their potential influence on the environmental determinants of children’s physical activity behavior [20]. In two municipalities, an additional policy sector was included (environmental affairs and play facilities for municipalities B and D, respectively). Although collaborations with (semi)public or private parties outside the municipal organization (such as sports clubs or housing corporations) are very common [21] and can also have beneficial effects on the integrated approach of stimulating physical activity, these collaboration initiatives were beyond the scope of this study, which merely focused on multi-sector policy collaboration within the municipal organization.

2.2. Data collection

Semi-structured face-to-face interviews were conducted with policy officers of the different policy sectors in each municipality between February and May 2009. The Dutch municipal government consists of a (rather extensive) bureaucratic level staffed by policy officers, which supports the political level (aldermen and mayor) in administrating the municipality. The members of the municipal council supervise the alderman and mayor and hold power of decision. Whereas the alderman and municipal council members are re-elected every four years, the pool of policy officers remains more stable over time. Therefore, respondents in this study were deliberately chosen from the municipal bureaucratic system, because it was supposed that the policy officers were best informed regarding the content of the policies within their sector and because this would yield a homogenous group of respondents. Respondents were recruited by means of “snowball sampling”, starting with existing contacts with policy officers in the public health domain within each municipality, who referred to their colleagues from other policy sectors. Except for one policy officer youth and education (municipality D), all invited policy officers were willing to participate in the study. In total, 25 respondents (policy officers) were interviewed, resulting in an average of six interviews per municipality. A semi-structured interview protocol was developed specifically for the purpose of this study. The interview protocol...
was submitted for evaluation to three Dutch academic experts in the field of public health policies, which led to some minor changes in the protocol. The final interview protocol included the following topics: (a) policy initiatives (policy plans, policy measures or policy actions) that are undertaken to stimulate physical activity among children or that address the environmental determinants of physical activity among children, (b) collaboration with other policy sectors (collaboration network) regarding these policy initiatives, (c) collaborating strategy, (d) interrelatedness of the actors in the collaboration network and (e) facilitators and challenges in multi-sector policy action. In addition to the pre-set topics, respondents were explicitly asked to bring in other relevant topics when considered needful. Interviews were conducted by one of the authors and had an average duration of 45 min. On request of two respondents, two interviews were conducted by telephone. With permission of the respondents, all interviews were audio-taped with a digital recording device. After completion of the 25 interviews, the interviewer felt that a saturation point was reached, as no new information was gathered anymore during the last interviews. To ensure that respondent could speak freely, complete anonymity in all external reports was guaranteed.

2.3. Data analysis

All interviews were overheard afterwards by two authors and transcribed *ad verbatim* by research assistants. The transcripts were coded and analyzed using the qualitative data analysis software package Atlas.ti version 6.0 (Atlas.ti, Berlin, Germany). Coding interview transcripts with analytical software contributes to a more systematic analysis of qualitative data and prevents information-processing bias [22]. Based on the interview protocol, a list of coding constructs was compiled and all interview transcripts were coded by one author. When necessary, extra codes were added to the coding list during the coding process. Two other authors independently coded a subset of four interviews and these results were compared with the codes of the first coder. By comparison and discussion of the results, some small adjustments were made to the coding protocol (particularly, some codes were merged, because they had too few distinguishable characteristics). Finally, all interviews were coded once again with the renewed protocol by one author. Data were analyzed case by case and whenever appropriate, data were pooled for the four municipalities or per policy sector. Cross-case analyses were performed to identify similarities and differences between cases in perceived facilitators and challenges for multi-sector policy action.

3. Results

3.1. Policy initiatives related to activity-friendly environments

Based on the number of quotations in the transcripts (pooled for the four municipalities), Fig. 1 gives an indication of the current policy initiatives of the different policy sectors addressing (the environmental determinants of) physical activity in children. The policy initiatives mentioned by the respondents included written policy plans such as a plan for play facilities (municipality A), a bicycle memorandum and air quality plan (municipality B), and a sports memorandum and public health memorandum (municipality C). In municipality D one respondent also mentioned official policy guidelines for distribution of play facilities within neighborhoods. More often, however, respondents came up with practical examples of policy measures and projects that were implemented in their municipality, such as the construction of a sports track, increasing social safety at squares by means of placing cameras, lighting and prohibition of gatherings of problem youth, providing low-income families with tickets to participate in cultural and sports activities (municipality A), organizing street soccer competitions with famous soccer players, providing sufficient bicycle sheds at popular destinations (municipality B), introduction clinics of sports clubs at primary schools and stimulating active transportation to school among handicapped children (municipality C), and offering after-school sports activities at primary schools, a project to diminish bicycle theft, and a project to decrease vandalism at primary school yards (municipality D).

Each policy sector enrolled in this study conducted policy initiatives that were related to the physical activ-
ity level of children or its environmental determinants, such as traffic situation, sports and play opportunities or sports education at primary schools. However, these initiatives were often not directly aimed at stimulating physical activity among children. Rather, the policy initiatives were developed for other purposes. For example, a policy officer described the policy plans to reduce air pollution: “In the air quality plan we have included policy measures that are beneficial for the air quality, but we want to broaden that, because it should not only be better for the air quality, but also bring down the noise of trucks and cars. And it should also lead to an attractive city centre, which is easily accessible, because that is good for the entrepreneurs.” We’ve also got some policy measures that affect the health of the citizens, not specifically children’s health, but citizens in general. For example we create bike lanes that are presently absent in commonly used routes. But we also provide bicycle racks and bikes for hire and take care of the communication and marketing around it. But the first goal is always to meet the pollution norm, or even to get below those norms.” Although some respondents were skeptical about the possible contribution of their policies to children’s physical activity at first, during the interview they came up with several examples of how the current policy initiatives within their sector actually contributed to an activity-friendly environment for children. Furthermore, although the sectors public health and sports (and in municipality D also the sector play facilities) were more directly involved with physical activity and children, no single policy sector could be marked as “problem owner” for stimulating physical activity among children by means of creating an activity-friendly environment.

3.2. Multi-sector policy collaboration in relation to activity-friendly environments

Fig. 2a–d shows that in two of the four municipalities (municipalities A and D), collaboration between the different policy sectors had a predominantly incidental character, which meant that collaboration was only sought when there was a direct reason or occasion for it, such as the construction of a skating or cycling track for children. In the other two municipalities (municipalities B and C), some form of structural collaboration between sectors had developed, which meant that policy sectors had regular meetings, even when there was no immediate cause. In municipality B, the structural collaboration was a result of a bicycle memorandum to which all collaborating sectors made contributions. Since then, these sectors had decided to meet several times a year to discuss possible common grounds in their policies regarding health and environment. In municipality C, the development of the public health memorandum (as from 2002, all Dutch municipalities are obliged to set up a public health memorandum every four years) was the immediate cause for setting up a collaborative network, which continued after the memorandum came out. Although the structural collaborations in municipalities B and C were characterized by a high frequency of meetings (several times a year), they nevertheless did not encompass sectors related to the built environment (e.g. spatial planning/public space). In general, respondents acknowledged the benefits of multi-sector collaboration, because they thought it increased the quality and sustainability of their policy plans: “Multi-sector collaboration can lead to a good spatial planning, which satisfies everyone, and which has a durable quality, because..."
a well planned neighborhood will still be a good place to live in also within ten years. We don't want to redesign a neighborhood very quickly." (policy officer spatial planning). Respondents further mentioned the benefits of active and healthy children for other policy goals, such as education goals. In all municipalities, however, respondents indicated that multi-sector collaboration was usually aimed at implementation and realization of policy measures instead of policy development such as writing a memorandum. Furthermore, in most collaboration initiatives, there was no plan of action, no concrete objectives were formulated and according to the respondents, the finance structure was still separated between policy sectors. The relationship between the different sectors involved in the collaboration was mostly described as positive and respondents shared the opinion that different policy sectors need each other to achieve the best results: “If you want to change something in the built environment, then you need them [the other policy sectors like spatial planning]. You need them for the realization, but also for financial reasons.” (policy officer youth and education, talking about making school environments more activity-friendly).

**3.3. Facilitators and challenges for multi-sector policy action aimed at activity-friendly environments**

Fig. 3a and b summarizes the main facilitators and challenges for multi-sector policy action that were put forward by the respondents. The most frequently mentioned facilitator was support for multi-sector policy plans and awareness for the effect of policy plans on physical activity in children among policy makers of other sectors. Secondly, a positive political context was regarded as an important facilitator for multi-sector policy action. “We work by order of politics, so if politicians mention in their plans, in their coalition agreement, that the sector spatial planning has to do more to stimulate physical activity, then I am sure that there will be more attention for that.” (policy officer spatial planning). Respondents further underlined the importance of “knowing each other” and being informed about policy plans of other policy sectors, which facilitates timely connection with other policy initiatives. Other facilitators for multi-sector policy action that were put forward by the respondents included working in small settings (the number of employees per municipality ranged from 679 to 2189 in this study), a low turnover of policy officers and increased mandate among lower policy officers, so that unnecessary deceleration of the policy process due to gathering permission from executives is prevented. Respondents also proposed that there should be more attention for multi-sector policy development during education of policy officers such as at the School for Public Administration and that current policy officers should be trained for the special skills they need for multi-sector policy action, such as negotiation and persuasion techniques: “We need professionalization. (...) It stays limited to the call
for an intersectoral approach, but I think you have to train people for that, because they need other skills.” (policy officer public health).

The most frequently mentioned challenge for multi-sector policy action was lack of time and resources. Besides the view that politicians do not always provide sufficient financial resources to carry out the policy plans that are desired, lack of time among policy officers was mentioned as a real bottleneck for multi-sector policy action. “Multi-sector collaboration always takes time. It always delays the process. You have to get around the table with more people, so more ideas will come up, and those ideas do not always fit your own ideas. As a consequence, you have to adjust your plans.” (policy officer traffic and transportation). Lack of support from other policy domains for policy plans aimed at creating activity-friendly environments was mentioned to be a challenge as well. Lack of awareness of the effect of policy plans on activity-friendliness of the environment
among other policy sectors, but also among politicians was frequently mentioned as a challenge in multi-sector policy action. Respondents also mentioned that the fact that politicians such as municipal council members and alderman are elected every four years, did not support the development of multi-sector policy plans, because such plans usually take more time to show off effects. Respondents indicated that conflicting visions and interests among different policy sectors could hamper multi-sector policy actions as well. For example in new housing developments, esthetic interests or financial concerns (e.g. selling as many houses per square kilometer as possible) often get priority over health considerations. When comparing data across municipalities, it appeared that except for some small divergences, the three most important overall facilitators and challenges described above were also rated as highly important in each individual municipality.

4. Discussion

This study provides insight into the current multi-sector policy actions aimed at creating activity-friendly environments for children, the role of multi-sector policy collaboration herein, and explores facilitators and challenges for such a multi-sector policy approach in four Dutch municipalities. Based on the results of this and other studies, opportunities for further enhancing multi-sector health policies are discussed below.

4.1. Raising awareness and defining problem ownership

This study showed that policy officers from sectors outside the public health domain were not always aware of the (side) effects of their policy initiatives on activity-friendliness of the environment, which implicates that gains could be achieved by making these policy officers more conscious about the potential health effect of their policy initiatives. In addition, this study showed the importance of increasing awareness and support for a multi-sector approach among politicians such as aldermen and municipal council members as well. This finding was also supported by another Dutch study focusing on the municipal setting, which emphasized the importance of multi-sector collaboration at the strategic and tactical level (e.g. collaboration between the management of different policy domains) [23]. A formal policy tool such as Health Impact Assessment (HIA) is likely to stimulate awareness of health effects of policy plans outside the public health sector. For example, after the introduction of HIA in Slovakia it was concluded that intersectoral policy development could benefit from more a formal working framework such as HIA [24]. However, HIA is a reactive tool aimed at quantifying the potential health effects of intended policy plans outside the public health domain, and as such it does not actively stimulate other policy sectors to contribute to an activity-friendly environment [25]. Therefore, HIA might be helpful, but not sufficient, to raise awareness among other policy sectors. This study further showed that each of the policy sectors contributed to an activity-friendly environment, but no single policy sector could be marked as “problem owner” for this topic. In line with previous Dutch research [21,26] this indicates that multi-sector policy action can benefit from a more explicitly defined problem ownership and role of the actors involved. The sectors public health, sports and youth and education could be marked as problem owners for the multi-sector approach of physical inactivity among children and could take the lead in future multi-sector policy initiatives. This requires action at a higher (political) level, for instance aldermen of several sectors involved could initiate a multi-sector approach and assign one of the sectors with the leadership of such an integrated approach. In order to achieve this, the “problem” should have political urgency, or at least be at the political agenda, a phenomenon extensively addressed by Kingdon [27]. An alternative possibility to enhance multi-sector policy action is the appointment of an explicit liaison officer that acts as the problem owner for multi-sector health policy development. In one of the municipalities included in this study, a liaison officer called “health broker” had recently started to actively involve other municipal policy domains in public health topics, but because this concept was still in an early stage, it was too early to show off effects yet.

4.2. Further enhancing multi-sector collaboration

In two of the four municipalities some form of structural collaboration between policy sectors was present, but the number of sectors involved was still limited, a finding confirmed in other research [16]. Our findings that clear objectives and implementation plans were mostly lacking in multi-sector collaboration initiatives, was confirmed as well in a study in Sweden [28]. Respondents generally did recognize the opportunities of multi-sector policy collaboration, because they thought it increased the quality and sustainability of their policy plans. Respondents also indicated that they were dependent on other policy sectors for achieving their own goals. As in our study, respondents in other research also shared the opinion that a single policy measure will not be sufficient to tackle complex health problems such as obesity and that an integral (and multi-sector) approach is warranted [29]. In conclusion, these findings indicate that there is room for expansion of multi-sector collaboration, and that this could have a potential stimulating effect on integrated health policy action. Successes within municipalities already involved in (structural) multi-sector collaboration (such as in municipality B and C in this study) could serve as a role model for municipalities that are willing to adopt such an approach as well. Although there is much social research into functioning of inter-organizational networks (for example of a whole network perspective see Provan et al. [30]), less scientific literature is available on intra-organizational networks and collaboration in the field of prevention-related topics, specifically at the local/municipal level. Therefore, future research could further explore the possibilities of stimulating integrated health policy through enhancing multi-sector policy collaboration at the municipal level.
4.3. Attention for facilitators and challenges

The main challenge for (structural) multi-sector policy action mentioned by the respondents in this study was lack of time and resources, which was also frequently mentioned in other research [24,26]. Attention should therefore be given to prevailing – and perhaps appropriate – (negative) presumptions regarding multi-sector policy action, for example by education and training of (future) policy officers and politicians. Because some respondents in this study mentioned that results of multi-sector policy actions were difficult to measure and other research demonstrated that multi-sector policies can also have antagonistic (undesirable) effects [31], it is important to measure and demonstrate the positive aspects of multi-sector policy actions, such as a possible increase in quality and sustainability of policy plans. Research that provides insight into the costs (in terms of time and resource investment) and effects (on quality and sustainability of policy plans and the long term effect for public health and other policy goals) of multi-sector policy measures could help to persuade policy officers and politicians to invest in multi-sector policy action. In addition, a positive political context at the municipal level was mentioned as an important facilitator for multi-sector policy development in this study. Other research has shown that a national policy orientation towards “sport for all” is related to better opportunities and a better infrastructure for sports and physical activity [32]. This suggests that there is an interaction between the national and local political context. Hence, a national political context in favor of multi-sector health policy development and creating activity-friendly environments could stimulate such an approach at the local level as well.

4.4. Limitations of this study and directions for future research

This study is among the first to empirically address multi-sector policy action at the local level and the qualitative nature of this study provides in depth understanding of the multi-sector policy processes within the municipal organization. However, some methodological limitations should be mentioned. Firstly, the study was conducted in four medium-sized Dutch cities that show resemblance in location and composition of their population, and prudence is called for in generalization of the results. For example, it is likely that multi-sector collaboration processes are influenced by the number of employees within the municipal organization. Although the number of employees of the municipalities included in this study ranged from 679 to 2189, more research is needed to clarify the role of municipal organization size on collaboration processes and multi-sector policy action. Secondly, this study focused on horizontal collaboration among policy officers of the bureaucratic system of the municipality, because a homogenous sample of respondents increases the internal validity of the results. From the interviews it has emerged, however, that factors at other municipal levels, such as the management level or factors in the political context (i.e. aldermen or municipal council) can also play an important role in multi-sector policy action. Future research should therefore include different municipal organization levels and look at vertical collaboration between these levels as well [23]. In addition, this study only looked at intra-organizational collaboration, and future research should also address collaboration with (semi)public or private parties outside the municipal organization, because this can have a beneficial effect on integrated health policies as well. Lastly, although the number of quotations gives a global indication of the relative importance respondents attach to different concepts, no quantitative interpretations (e.g. in terms of percentages) can be derived from these quotations.

5. Conclusions

This study shows that multi-sector policy action aimed at creating activity-friendly environments for children is still in its infancy and that such an approach can be stimulated by raising awareness and defining problem ownership, further enhancing multi-sector collaboration and paying appropriate attention to facilitators and challenges.

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