

PUBLISHED IN: **EUROPEAN JOURNAL OF PUBLIC HEALTH** [IN PRESS]

**SEARCHING FOR SUSTAINABILITY WITHIN PUBLIC HEALTH POLICY:
INSIGHTS FROM AN INJURY PREVENTION PERSPECTIVE**

Gail Errington¹, Catrin Evans², Michael C Watson²

¹Institute of Health and Society, Newcastle University, England

**²Faculty of Medicine and Health Sciences, School of Health Sciences,
University of Nottingham, England**

Correspondence to: Dr Gail Errington,

Institute of Health and Society

Newcastle University

The Baddiley-Clark Building

Richardson Road, Newcastle Upon Tyne

NE2 4AX

Telephone: 0191 208 7027

e-mail: gail.errington1@newcastle.ac.uk

ABSTRACT

Background

Sustaining public health programmes in the long-term is key to ensuring full manifestation of their intended benefits. Whilst an increasing interest in sustainability is apparent within the global literature, empirical studies from within the European setting are few. The factors that influence sustainability are generally conceptualised at three levels: programme level, the immediate context and the wider environment. To-date attention has focused primarily on the former two. Using a community-based child injury prevention programme in England as an exemplar, this paper explores the concept of sustainability within the wider policy environment, and considers the impact of this on local programmes.

Methods

A content review of global and UK national public health policies (1981 – 2014) relevant to child safety was undertaken. Interviews were held with senior representatives of global and UK agencies involved in developing child safety policy.

Results

Forty-nine policies were reviewed. The term 'sustain', or its derivatives, featured in 36 (73%) of these. Its' use however, related primarily to conservation of resources rather than continued programme operation. Potential mechanisms for supporting programme sustainability featured within some documents, however, the approach to sustainability was inconsistent between policies and over time. Policy stakeholders identified programme sustainability as relevant to their core business, but its' conceptualisation varied according to individual interpretation.

Conclusions

Programme sustainability is poorly addressed within global and UK-based public health policy. Strengthening a national and international policy focus on sustainability and incorporating sustainability into public health planning frameworks may create a more supportive environment for local programmes.

Keywords:

Programme sustainability

Public health policy

Injury prevention

INTRODUCTION

Within the public health literature, the definition of sustainability is contested. A common element, however, is the continuation of programme activities in order to provide ongoing benefits to the target group.¹⁻³ The behavioural outcomes of community-based public health programmes often concern changes that occur over the longer-term.^{4,5} Sustaining programme operation beyond the initial period of support may, therefore, be essential if benefits are to manifest fully. Planning for sustainability may offer a cost-effective means of resource deployment, a particularly important consideration for complex, community-based programmes where the level of initial investment may be substantial.^{6,7}

The global public health literature demonstrates a growing research interest into programme sustainability,⁸ however, much of this originates from outside Europe. Programme sustainability does not occur automatically,^{3,9} and is subject to the influence of a range of inter-related factors that may be amenable to intervention.^{3,8,10} These factors may exert their effect: i) on the programme, ii) within the immediate setting, or iii) within the wider environment. These differing levels of influence have informed a socio-ecological conceptualisation of sustainability.^{2,8,10}

It has been suggested that a supportive policy context in the wider environment may positively influence the sustainability of public health programmes.^{7,10}

Despite this, research to-date has focused primarily on influences that operate at the level of the programme or on the immediate setting, rather than those acting in this wider environment.

This paper reports on research that was conducted as part of a study into the influences on sustainability within a community-based home safety programme for young children that operated in England. Multi-component, community-based interventions of this type are recommended to address childhood injury,^{11,12} however the potential for their continued operation beyond the period of initial support and implementation is poorly understood. An exploration of sustainability within the national and international policy context for child injury prevention was undertaken. The aim of this research was to provide a wider environmental perspective to enhance current understanding of the influences on sustainability.

METHODS

Methods overview

Two approaches were used: review and analysis of policy documentation,¹³ and a series of stakeholder interviews to contextualise the findings.¹⁴

Policy review

A content review of public health policy documents published at national (England) and international level was conducted. The definition of 'policy' was taken from Bull et al¹⁵:

"[a] formal statement that defines priorities for action, goals and strategies, as well as accountabilities of involved actors and allocation of resources"

p.94

In order to identify influences on current policy that may have developed over the longer term,¹³ the review included documents published by both government and non-governmental organisations over a thirty year period (1981 – 2014). Documents were identified using researcher knowledge, database and website searches (see Table 1) and advice from injury prevention experts. Inclusion criteria were as follows:

- Published in the English language post-1981
- Inclusion of goals/objectives/recommendations for improved child health
and/or
- Identification of strategies or priorities for action on injury.

A standardised data extraction form was developed (available on-line as supplementary material – see File 1). This considered the policy content, method of implementation and the wider context into which the policy was introduced,^{13,16} as well as recording additional information specific to sustainability. In-text keyword searches for sustainability and associated terms were conducted on policy documents that were available electronically (see Table 2). Constant comparison of the content enabled identification of inductive themes that formed the basis for the reporting narrative.¹⁷

Interviews with policy stakeholders

Telephone interviews were held with senior representatives from stakeholder agencies with an interest in policy development for child injury prevention. Named individuals identified by injury prevention experts were contacted and invited to participate, or to nominate a colleague to do so. Flexible interview topic guides were developed that considered the role of the agency and the ways in which sustainability was conceptualised and addressed within this. Participants were asked for their views on the barriers and facilitators to sustaining injury prevention programmes, and for ideas as to how sustainability might be assessed. Interviews were transcribed verbatim and framework analysis was used to identify themes.¹⁸

RESULTS

Policy review

Overview of policy documents

Forty-nine public health policy documents were reviewed (a table of references is provided on-line as supplementary material – see File 2). Twenty were of international or European origin (published 1981 – 2014) and 29 originated in England (published 1992 – 2014). Document lengths ranged from 4 - 232 pages (international) and from 30 – 352 pages (national). International documents were generally of an advisory nature and broader in content than national documents to account for the diversity in health and implementation patterns between countries.

Two documents were unavailable electronically^{19,20} and one could not be accessed in a format that supported searching of the text²¹, thus 46 (94%) documents were subject to in-text searches for terms associated with sustainability. Of these, 36 (78%) included the term 'sustain' or its derivatives. In a majority of cases 'sustain' was used in the environmental sense, referring to conservation of resources or to the physical environment as opposed to the sustainability of programmes.

Definition and conceptualisation of programme sustainability

None of the policy documents reviewed provided a definition for 'sustain' or its derivatives, nor did they make explicit reference to its meaning within public health. Several documents made reference to other publications on sustainability, for example 'Sustainable Communities', 'Sustainable Schools',

suggesting perhaps that the term may have been imported into public health usage from other settings.

Among the alternative terms associated with sustainability, 'integrate' was prevalent in both international and national policy documents, though its use declined in English policy from 2003 onwards, apparently being replaced by the term 'embed'. One policy document of international origin, relating to the Safe Communities Network, featured the term 'embed'.²²

The long-term nature of health outcome improvements was recognised in both international and national documents, together with the need for ongoing policy commitment. However, few documents acknowledged that achieving long-term benefits may be reliant on continuity of programme activities over time. One example that did so, an independent review conducted by the National Accident Task Force in England,²³ stated:

"There are some quick wins to be made in reducing the numbers of people killed or seriously injured. However, long term commitment within a framework for action at all levels is necessary to bring about programmes that are sustainable over time". p.65

Arbitrary descriptions such as 'long term' were used with respect to programme timescales, with no further clarification provided. Examining the co-location of the term 'sustain' within the text revealed that in several documents this appeared at the end of a list of desirable but poorly defined programme characteristics. The following extract from the World Report on Child Injury Prevention provides an example: ¹²

"...more widespread use in developing countries of... safety equipment is likely not only to be effective but also affordable, feasible and sustainable".

p.113

Programme funding

In several of the documents that reviewed English policy, inadequate and uncertain funding sources were considered to be a particular threat to sustaining local action on injury. A report produced by the Audit and Healthcare Commission provides the following example:²⁴

"Developing and sustaining schemes such as these have brought several challenges. We have identified serious concerns about underfunding and the instability of funding streams..."

p 46

The suggestion that financial resources could be pooled between participating agencies at a local level was rejected in one progress review document.²⁵ Practical barriers to this approach included the lack of co-terminus boundaries between organisations, the resolution of which was considered to require central government intervention.

Potential strategies for programme sustainability

The policy review considered the extent to which documents provided support for sustainability, relating this to strategies identified within the wider public health literature^{3,8,10}. These are presented below.

i) National government commitment

The positive influence of a supportive national policy context on the implementation of injury prevention plans was acknowledged within several

international documents.^{12,26-28} Within English policy, however, the review identified fluctuating levels of support for injury prevention over time. The absence of ongoing national policy commitment challenged local efforts for programme sustainability, as reported by the Audit and Healthcare Commissions:²⁴

"At present there is no single, clear, cross-governmental statement which draws together what has to be done to reduce unintentional injury ...Without high level support, the long-term sustainability of programmes was threatened."

p.6

ii) Partnership working

Documents acknowledged the benefits of collaborative working. However, within the English setting, reviews of public health policy highlighted specific challenges associated with maintaining stakeholder partnerships in the wake of national re-organisation of children's services.

iii) Capacity and infrastructure

The need for increased training and capacity in order to sustain injury prevention efforts was a recurring theme in the international and national documents reviewed. Capacity in the context of injury prevention has been defined as the:

"development, fostering and support of resources and relationships at individual, organizational, inter-organizational and systems levels".

²⁹p.66

Indeed, the World Health Organization,³⁰ identified capacity building as:

"...one of the main challenges facing the injury prevention area today"

p.1

and has responded by developing a modular training course and skills development programme for violence and injury prevention.

The English government has, at various times, supported a range of nationally-based injury training initiatives but resources and financial support for these were not always identified within the documents reviewed. National agencies advocating for injury prevention in England have consistently recommended the re-instatement of local programme co-ordinators, ^{31a} a post initially established in Health of the Nation.¹⁹ To-date, however, this has not been adopted within public health policy.

iv) Integrating intervention programmes into a broader agenda

The potential for mainstreaming injury prevention into a broader health agenda, as a means of securing programme funding, featured frequently within international policy. In England, the responsibility for public health transferred to local government authorities in 2013. Several recent national advisory documents presented this as an opportunity to align injury programmes with other policies, such as those for housing and the built environment.³²⁻³⁵

Interviews with policy stakeholders

Participant profile

Telephone interviews took place with 6 senior representatives from 6 agencies (2 international and 4 national). Three of the agencies had an injury prevention focus and three had a more general public health remit. Participants came from

a variety of professional backgrounds. The most recently appointed had taken up post six months earlier, whilst the longest serving had been in post for 12 years.

Agency role in programme sustainability

Programme sustainability was regarded as relevant to the core business of the employing organisation by all participants. The contribution towards sustainability made by each agency fell into 3 broad categories: raising awareness/advocating for injury prevention; provision of practitioner guidance/support and the development and delivery of intervention programmes. Agencies often identified with more than one of these roles.

Definition and conceptualisation of programme sustainability

The definition and conceptualisation of sustainability varied between participants. Personal experience appeared to shape individual understanding. For example, participants with experience in the charitable sector primarily associated sustainability with the challenge of obtaining adequate funding for their employing organisation:

"that constant looking...that kind of year-on-year "Have we got funding for these people that we're employing?", "Will we be able to do this next year?" is really destabilising."

[National health agency A]

Two participants regarded sustainability as an ongoing process, as illustrated by the following interview extract:

"...where that initiative has been developed, it's been piloted, it's been evaluated and seen to be effective... and then there's a chance to develop it

further, roll it out further, make sure that it's taken up in other places and also to ensure that it can continue to grow and [to] learn from its work".

[National injury prevention agency B]

Alternative terms used by participants to describe sustainability included 'traction', 'maintenance', 'embedding' and 'mainstreaming'.

Challenges to sustainability

Interviewees viewed lack of funding as a major challenge to programme sustainability. In particular, the short-term nature of funding sources could inhibit longer term programme planning and potentially compromise the achievement of positive health outcomes.

"A flash-in-the-pan programme is not going to deliver sustainable results."

[National injury prevention agency C]

Participants reported that increasing competition for available resources had stimulated greater focus on the cost-effectiveness of interventions, with agencies seeking ways in which to frame injury programmes so as to support wider health agendas.

"If the intervention is framed to them as something ...that opens up other doors for the children, or there are cross-cutting benefits for health and socialisation."

[International health agency A]

Agencies that worked within the English setting reported specific challenges to sustainability associated with ongoing re-organisation of the wider service context. Central government devolution of responsibility for public health to

local authorities was generally supported. Some comments suggested however that this process was still in the transition stage, creating uncertainty for local public health actors.

"We are used to a certain amount of central direction and see that as kind of normal ...the previous government obviously did a lot more of that but you can see people looking around wanting that".

[National injury prevention agency B]

Strategies to support sustainability

Policy stakeholders suggested several potential strategies to encourage sustainability. These included the appointment of a co-ordinator and/or identification of programme champions at local level, both seen as a means of retaining a focus and demonstrating commitment to the initiative. Collaborative working was also regarded to offer opportunities to enhance sustainability. The lobbying role of national organisations was highlighted as a potential means of influencing public health priorities in favour of injury prevention:

"You can't underestimate the influence and effect that lobby groups and charities can have to keep things on the agenda."

[National health agency A]

Assessing sustainability

There was little consensus between participants as to how programme sustainability might be assessed. The diversity of settings and variety of approaches used in injury interventions led to the suggestion that programme-specific, rather than generic, indicators may be required:

"...it would depend on the nature of the intervention...some are legislative in nature and others are very practical. If you then talk about building in

sustainability from the outset there's a different kind of approach that would make sense depending on what sort of level of intervention we're talking about".

[International health agency A]

DISCUSSION

The review of policy documentation and the stakeholder interviews conducted within this study revealed a diverse terminology associated with the sustainability of injury prevention programmes. Similar findings have been reported in the wider sustainability literature.¹⁻³ Variation in the definition and conceptualisation of sustainability was noted between policy stakeholders. Other studies have attributed this to differing expectations between professional groups.^{36,37} The current findings would suggest that organisational culture combined with personal experience may contribute to an individualised understanding of sustainability.

An important finding of this study was the low profile afforded to programme sustainability within injury prevention public health policy documents, both at international and national (English) level. In contrast, stakeholders in injury prevention regarded sustainability as an important issue. This apparent mismatch of priorities may indicate a lack of political influence wielded by the injury prevention agencies involved.³⁸ Historically, government-supported public health initiatives in England have received short-term funding, potentially limiting demonstration of their effectiveness. An increased emphasis on programme sustainability, led by national policy makers and supported by practitioners, may help to address this.

Where sustainability was considered within documents, this was primarily conceptualised as an 'end stage' of programme development, an approach that was not explicitly challenged by the injury stakeholders who foregrounded continued funding above all other aspects of sustainability. These findings point to a need for programme funders and providers to consider sustainability from

an early stage and include it as an integral step of programme planning.⁶ Existing conceptual models for sustainability will be of value in informing this process.

The strategies for sustainability suggested by policy stakeholders included partnership working, increasing workforce capacity and integrating programmes with a wider health and wellbeing agenda. Whilst some of these were reflected within policy documents, no consistent approach to the issue of programme sustainability as a whole was apparent.

Stakeholders within the current study identified increased competition for funding, and ongoing change within the service context as barriers to sustainability. The influence of both of these contextual factors is evident within the current environment for public health in England.^{39,40}

The diverse terminology, definitions and conceptualisations associated with the sustainability of injury prevention public health programmes make this a complex area for research.^{1,3} Despite this, the current study identified some areas of consensus between injury stakeholders and policy documents, along with several promising mechanisms to promote programme sustainability. Public health policy has an active role to play in generating a supportive environment for programme sustainability. This role could be strengthened, for example, by policy makers demonstrating consistency in their commitment to capacity building, reducing barriers to collaboration and enhancing opportunities for improved integration between health and wellbeing agendas.

Strengths and limitations of the study

The review included policy-related publications produced by a range of organisations and was further strengthened by the inclusion of an injury stakeholder perspective. The latter revealed the relevance of programme sustainability to those agencies attempting to influence injury prevention policy, and identified barriers and facilitators associated with their efforts to promote sustainability.

Researcher bias in participant selection and data interpretation was addressed by seeking advice from experts in the field of injury prevention and by subjecting the findings to expert review.

CONCLUSION

This study revealed a diversity of terminology and conceptualisation associated with sustainability in the injury prevention setting. These findings are supported by empirical research in other areas of public health. The low priority afforded to programme sustainability within injury prevention public health policy documents constitutes a potential barrier to programme maintenance.

International and national public health agencies are encouraged to open a dialogue between public health policy makers, commissioners and practitioners in order to reach a shared understanding on the nature of sustainability, and to identify ways in which a supportive climate for sustaining local programmes may be developed. The incorporation of sustainability as an essential component of public health planning frameworks may assist local practitioners to demonstrate optimal programme outcomes.

Acknowledgements

This study was funded by a scholarship (2011-2014) from the Royal Society for the Prevention of Accidents and British Nuclear Fuels Limited.

Partial fundings were presented at the 7th European Public Health Conference held by the European Public Health Association, Glasgow, 19-22 November 2014 and at the annual conference of the Faculty of Public Health held in Gateshead, 23-24 June 2015.

Conflicts of interest

None declared

Key points

- There is a paucity of research from the European setting into factors that may influence the sustainability of public health programmes.
- Programme sustainability, and the ways in which this may be encouraged, has been poorly addressed within public health policy to-date.
- Sustainability should be incorporated into public health planning frameworks at international and national level in order to support the efforts of local programme practitioners.

References

1. Scheirer M. Is sustainability possible? A review and commentary on empirical studies of program sustainability. *Am J Eval* 2005;26:320-47.
2. Shediac-Rizkallah M, Bone L. Planning for the sustainability of community-based health programmes: conceptual frameworks and future directions for research, policy and practice. *Health Educ Res* 1998;13(1):87-108.
3. Wiltsey Stirman S, Kimberly J, Cook N, Calloway A, Castro F, Charns M. The sustainability of new programs and innovations: a review of the empirical literature and recommendations for future research. *Implement Sci* 2012;7:17.
4. Towner E, Dowswell T. Community-based childhood injury prevention interventions: what works? *Health Prom Int* 2002;17(3):273-84.
5. Nutbeam D, Harris E, Wise M. Theory in a nutshell: a practical guide to health promotion theories. Third rev ed. North Ryde, NSW: McGraw-Hill, 2010. 81 p.
6. Pluye P, Potvin L, Denis JL, Pelletier J. Program sustainability: focus on organizational routines. *Health Prom Int* 2004;19(4):489-500.
7. Schell SF, Luke DA, Schooley MW et al. Public health program capacity for sustainability: a new framework. *Implement Sci* 2013;8(15).
8. Scheirer M, Dearing J. An Agenda for Research on the Sustainability of Public Health Programs. *Am J Public Health* 2011;101(11):2059-67.
9. Savaya R, Spiro S, Elran-Barak R. Sustainability of Social Programs. *Am J Eval* 2008;29(4):478-93.
10. Gruen RL, Elliott JH, Nolan ML et al. Sustainability science: an integrated approach for health-programme planning. *Lancet* 2008;372(9649):1579-89.
11. Kendrick D, Coupland C, Mulvaney C. Home safety education and provision of safety equipment for injury prevention. *Cochrane database of systematic*

reviews, Issue 1, Art No:CD005014. DOI: 10.1002/14651858.CD005014.pub2. 2009.

12. Peden M, Oyegbite K, Ozanne-Smith J et al World Report on Child Injury Prevention. Geneva Switzerland: World Health Organisation, 2008.

13. Walt G, Shiffman J, Schneider H, Murray SF, Brugha R, Gilson L. 'Doing' health policy analysis: methodological and conceptual reflections and challenges. *Health Policy Plan* 2008;23(5):308-17.

14. Simons H. Interpret in context: Generalizing from the single case in evaluation. *Evaluation* 2015;21(2):173-88.

15. Bull F, Bellow B, Schoppe S, Bauman A. Developments in National Physical Activity Policy: an international review and recommendations towards better practice. *JSciMedSport* 2004;1(7):93-104.

16. Daugbjerg S, Kahlmeier S, Racioppi F et al. Promotion of Physical Activity in the European Region: Content Analysis of 27 National Policy Documents. *JPhysical ActHealth* 2009;6:805-17.

17. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psych* 2006;3(2):77-101.

18. Ritchie J, Spencer L. Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, editors. *Analyzing Qualitative Data*. London: Routledge, 1994:173-195.

19. Department of Health. *The Health of the Nation - a strategy for health in England*. London: HMSO, 1992.

20. Department of Health. *The Health of the Nation: Key Area Handbook - Accidents*. London: HMSO, 1993.

21. Royal Society for the Prevention of Accidents. *The Big Book of Accident Prevention*. Birmingham: RoSPA, 2012.

22. World Health Organization. The Safe Community Network. Stockholm: WHO Collaborating Centre on Community Safety Promotion at the Karolinska Institutet, 1989.
23. Department of Health. Preventing accidental injury - priorities for action: a report from the accidental injury task force to the Chief Medical Officer. London: Department of Health, 2002.
24. Audit Commission and Healthcare Commission. Better safe than sorry: preventing unintentional injury to children. London: Audit Commission; 2007.
25. Department for Children Schools and Families, Department of Health, Department for Transport. Accident Prevention Amongst Children and Young People - A Priority Review. London: DCSF, 2009.
26. European Child Safety Alliance. Priorities for Child Safety in the European Union: Agenda for Action. Amsterdam: European Child Safety Alliance, 2004.
27. World Health Organization. Resolution: Prevention of injuries in the WHO European Region. Copenhagen: WHO Regional Office for Europe, 2005.
28. Council of the European Union. Council recommendation of 31 May 2007 on the prevention of injury and promotion of safety. Official Journal of the European Union. 2007;200(C164):1-2.
29. MacKay JM, Vincenten JA. Leadership, infrastructure and capacity to support child injury prevention: can these concepts help explain differences in injury mortality rankings between 18 countries in Europe? Eur JPublic Health. 2012;22(1):66-71.
30. World Health Organization. Capacity building for preventing injuries and violence: Strategic Plan 2009-2013. Geneva: WHO, 2009.

31. Watson MC, Mulvaney CA, Kendrick D et al. National survey of the injury prevention activities of children's centres. *Health Soc Care Community* 2014;22(1):40-6.
32. BMA Board of Science. Growing up in the UK - Ensuring a healthy future for our children. London: BMA, 2013.
33. Buck D, Gregory S. Improving the public's health: a resource for local authorities. London: The King's Fund, 2013.
34. Department of Health. Our children deserve better: prevention pays. Report of the Chief Medical Officer. London: Department of Health, 2013.
35. Royal Society for the Prevention of Accidents. Delivering accident prevention at local level in the new public health system. Birmingham: RoSPA, 2013.
36. Hanson H, Salmoni A. Stakeholders' perceptions of programme sustainability: Findings from a community-based fall prevention programme. *Pub Health*. 2011;125:525-32.
37. McMillan K. Sustainability: an evolutionary concept analysis. Exploring Nursing's role within the sustainability movement. *JAdv Nurs*. 2013.
38. Kickbusch I. The political determinants of health - 10 years on. *B M J* 2015;350(h81).
39. Iacobucci G. Raiding the public health budget. *BMJ*. 2014; 348:g2274.
40. Watson MC, J L. Need for increased investment in public health. *B M J* 2016;352:i761.

Tables

Table 1 Websites used in search for policy documents

Organisation	Website address
British Medical Association	http://www.bma.org.uk
Department of Health	http://www.dh.gov.uk/Publicationsandstatistics/Publications/PublicationsPolicyandGuidance/
European Union	http://europa.eu/legislation_summaries/public_health/european_health_strategy/index_en.htm
Injury Observatory Britain and Ireland	http://www.injuryobservatory.net/
Injury Prevention Journal	http://injuryprevention.bmj.com
National Institute for Health and Care Excellence	http://guidance/nice.org.uk
World Health Organization	http://www.who.int/publications/en

Table 2 Searches for in-text keywords associated with sustainability

Search term	Derivatives
Continuity Durab Embed* Incorporat Institutional Integrat Maint Ongoing Routini Sustain	Durable, durability Embedding, embedded Incorporate, incorporated, incorporating, incorporation Institutionalise/ize, institutionalisation/ization, institutionalised/ized Integrate, integrated, integrating, integration Maintain, maintained, maintaining, maintenance Routinise/ize, routinisation/ization, routinised/ized Sustainable, sustained, sustaining, sustainability