



Tackling the wider social determinants of health and health inequalities: evidence from systematic reviews

- Synthesising evidence from existing studies and systematic reviews is essential if effective interventions to improve population health and reduce health inequalities are to be identified.
- We know already that there are few evaluations of “wider public health” interventions, such as policies which affect the social determinants of health and health inequalities.
- There is some suggestive evidence that certain categories of intervention may impact positively on inequalities, though further evidence is needed.
- There is evidence that the effects of employment change are experienced differently by employees in different occupational categories, and some evidence about how this may be addressed. This suggests that the workplace may indeed be an important setting in which inequalities may be addressed.
- There is some evidence that housing improvements may positively affect physical health, but the effects may be quite small.
- It is becoming clear that the most important determinants of public health and health inequalities are the wider, upstream determinants; this raises the real possibility that government policies in sectors other than health such as housing, education, transport and employment offer real opportunities to improve health and reduce the health gap.
- It is particularly important to assemble new evidence on the *mechanisms* by which policies within the above sectors may affect health; this will help identify points at which to intervene and will provide a framework for the development of new primary research.

Background

Evidence synthesis is an essential component of the identification of effective interventions to improve public health and reduce health inequalities. Within the past five years, there have been increasing numbers of systematic reviews which directly address the social determinants of health. Moreover, various international groups have been systematically working on health equity issues to locate primary studies and systematic reviews of interventions which address health inequalities.

In the UK, the rate of production of new reviews has received additional stimulus from the 2004 Wanless report *Securing Good Health for the Whole Population* to the effect that systematic reviews are a robust, reliable and important contribution to ongoing work. Wanless points for example to the evidence briefings produced by the former Health Development Agency as good examples of accessible documents that synthesise international review-level literature. However, turning this demand for better evidence about interventions into action requires (i) identifying what we already know (in terms of the effects of interventions and their differential impacts); and (ii) identifying the gaps and using this information to identify priorities for new research.

This summary report is drawn from a project which represents a direct response to this call. It presents the results of a review of the evidence on the effects on health and health inequalities of interventions aimed at influencing the social determinants of health. The project aimed to identify existing systematic reviews and relevant primary studies, and to use these to identify priorities for new systematic reviews and for new primary studies of interventions addressing inequalities in health.

Full details of this project can be found on the PHRC website (www.york.ac.uk/phrc/).

Methods

Systematic review methods were used to locate and evaluate published and unpublished systematic reviews of interventions around the social determinants of health - with a focus on

developed/OECD countries – conducted during 2000-2007.

The review focused on living and working conditions and access to essential goods and services, water and sanitation, agriculture and food production, health (and social care) services, unemployment (and welfare), work environment, housing (expanded to include community, regeneration and crime), education, and transport. The findings were data extracted, critically appraised, and tabulated. Information was also extracted where available on inequalities and implementation issues.

Finally, the research recommendations were extracted from the systematic reviews. We also extended the search in order to identify and describe recently published primary intervention studies - that is, new primary studies published during this period (2000-2007) which would not have been included in the earlier reviews.

Key findings

We identified 32 systematic reviews and 16 primary studies across eight sectors: water and sanitation; agriculture and food; health (and social care) services; unemployment and welfare; working conditions; housing and community; education; and transport. There is some evidence that certain categories of intervention may impact positively on inequalities, in particular interventions in the fields of housing and employment, though, as always, further evidence is needed.

In the reviews of employment interventions (such as changes to the organisation of work, and privatisation) there is evidence from primary studies that the effects of change are experienced differently by employees in different occupational categories. This suggests that the workplace may indeed be an important setting in which inequalities may be addressed.

There is also suggestive evidence that housing change may positively affect physical health but the actual effects may be small. This is potentially important because it is part of the public health canon that housing is an important determinant of current population health and health

inequalities. However, although there is a growing and mixed evidence base – which now includes RCTs, and controlled trials - hard evidence that health is significantly impacted today by major housing change remains elusive.

There are many possible reasons why this may be so. The effects may be small, and thus existing studies may be underpowered, and large RCTs may be required to confidently attribute change to the intervention; the time lags to health improvement may also be long, such that short term outcome assessments fail to detect physical health change. This latter point may explain why improvements in mental health are consistently reported, but changes in physical health less so, at least in UK studies. We cannot however entirely discount the possibility that housing standards may have become generally so high in high-income countries over the past few decades that the effects of housing on population health may now be modest.

In the case of transport, the strongest evidence derives from studies of injury prevention, but the wider health impacts of transport policies on inequalities remain to be demonstrated. It therefore seems particularly important to strive for better evidence on how transport policies may be used to promote physical activity, and reduce related inequalities.

The most striking gap in the evidence base however is in relation to interventions to improve access to health and social care. The few reviews that we identified in the “access to healthcare” domain were limited to small-scale interventions to improve the access of very specific groups (mainly in the US, where the nature of the highly commercialised healthcare system limits generalisability).

No reviews were found that assessed the effects of wider health policies and health systems on access to health and social care for different groups in the population. As we also carried out additional searches to identify primary studies which would not have been included in the reviews, this is a major “evidence gap” and further research in this area is required.

We also identified no reviews in the education domain which examined the relationship between better standards of

education in the population and better long term health outcomes in adults. One priority for new reviews should be to investigate the role of education policies on health outcomes. There are many observational studies which show a clear association between education and health, and the association is not in dispute; however further analyses which explore the effects of educational policies and health outcomes over time are needed.

There appear to be gaps in the evidence base in relation to adult education, and access to health and social care. We identified no reviews in the education domain, and yet there is undoubtedly an untapped evidence base relating to the relationship between education and long term health outcomes in adults, and there also is a wealth of observational evidence. However new systematic reviews which investigate the role of education policies and interventions on adult health and inequalities may be of value.

Conclusions

Although we focused mainly on systematic reviews, we also searched for primary studies which may not have been included in those reviews (because they were too recent, for example). Thus any gaps in the evidence base we identify probably do not only relate to a lack of systematic reviews. There are, for example, some gaps where primary research may be available but has not yet been fully exploited, particularly in relation to access to health and social care, and the effects of education policies on adult health and health inequalities.

With relatively few reviews and primary studies available from recent years, the scope for further research is large (see below). In such circumstances, it is of paramount importance that the selection of priorities be guided by public health theory as well as by the existing evidence. In particular, it is becoming clear that the most important determinants of population health and health inequalities are the wider, upstream determinants and their unequal distribution. This raises the real possibility that government policies in sectors other than health - including housing, education, transport and employment - offer real opportunities to improve health and reduce the health gap. Healthy public policy involves not just identifying “magic bullets” - through developing new individual-level

interventions to change behaviour – but also making existing policy healthier, and collecting the evidence of these impacts using appropriate scientific methods.

Despite the methodological challenges and the difficulties of dealing with a restricted amount of evidence, we feel that this report has been valuable in opening up new areas of enquiry in specific areas. We therefore conclude with a number of specific research recommendations. We hope these will be used to direct researchers to the most productive areas for developing new primary and secondary research.

Implications for research

Research aimed at understanding the *mechanisms* which link social determinants with health outcomes.

New reviews and primary research on the social and economic returns to education.

Primary and secondary research on the effects of educational policies on health and health behaviours.

New reviews (requiring methodological development) of the effects of nationwide changes in health systems to improve geographic, economic or cultural access for the population as a whole, and for groups in greater need in particular.

Primary research on the effects of macro level policies on health and health behaviours; in particular food policies, given their under-representation in the evidence base.

Primary research on the effects of community-level interventions to promote food access.

Primary research on the effects of transport policies on physical activity.

Primary research on the effects of changes in the work environment on health and health inequalities.

New primary research on the health effects of welfare rights and welfare to work interventions.

Evaluations of interventions to promote access to healthcare, including lay health workers, outreach clinics and the provision of culturally-relevant healthcare.

Primary research on the effects of traffic calming, given that existing studies are now old and mostly non-UK based.

Primary research on the effects of transport infrastructure on health and non-health outcomes (e.g. health, and other services).

Further methodological research on the conduct of effective searches in the field of health inequalities.

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