



Social Determinants of Health Discussion Paper 7

Contributing to the project, The Economics of Social Determinants of Health



POSITION PAPER ON ECONOMIC ARGUMENTS FOR INTERSECTORAL INTERVENTIONS THAT IMPROVE THE SOCIAL DETERMINANTS OF HEALTH: MEXICO

DEBATES, **POLICY & PRACTICE**, CASE STUDIES

POSITION PAPER ON
ECONOMIC ARGUMENTS
FOR INTERSECTORAL
INTERVENTIONS THAT
IMPROVE THE SOCIAL
DETERMINANTS OF
HEALTH: MEXICO

The Series:

The Discussion Paper Series on Social Determinants of Health provides a forum for sharing knowledge on how to tackle the social determinants of health to improve health equity. Papers explore themes related to questions of strategy, governance, tools, and capacity building. They aim to review country experiences with an eye to understanding practice, innovations, and encouraging frank debate on the connections between health and the broader policy environment. Papers are all peer-reviewed.

Background:

The strong causal links between public policies and the social gradient in health were documented in the World Health Organization (WHO) Commission on Social Determinants of Health (CSDH) report. Yet even when health and health equity are seen as important markers of development, expressing benefits of social determinants of health (SDH) interventions in health and health equity terms alone is not always sufficiently persuasive in policy settings where health is not a priority, or when trade-offs need to be made. Previous research has shown that increased attention on policies across sectors that improve health and health equity requires better preparation with regard to knowledge on the economic rationales for interventions, as well with regard to how intersectoral policies are developed and implemented. In recognition of the usefulness of intersectoral actions and the prior experience of Mexico, the Mexican Task Force worked with WHO on the project of the Economics of Social Determinants of Health to produce case studies of intersectoral policies and the use of economic rationales, and to provide input on the other project publication- a resource book on the economics of social determinants of health and health inequalities.

Mexico has been recognized for its work on social policies addressing key health determinants related to poverty and poor living conditions, including for programmes like Oportunidades [Opportunities].

The views presented in this report are those of the author and do not represent the decisions, policies or views of the World Health Organization..

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Abbreviations

ANSA	National Agreement for Food Health
CENAPRA	National Center for Injury Prevention
HDI	Human Development Index
IMESEVI	Mexican Initiative for Road Safety/Mexican Road Safety Initiative
PAHO	Pan American Health Organization
PDHO	Human Development Programme – ‘Oportunidades’
PDZP	Programme for the Development of Priority Zones
PROGRESA	Education, Health and Nutrition Programme
SDH	Social determinants of health
WHO	World Health Organization

Executive summary

Mexico has made significant progress in the field of health in recent years, reflected in the increase in life expectancy at birth and reduced rates of maternal and infant mortality. However, health differences persist among regions, ethnic groups and socioeconomic groups. Mexico has launched various interventions in the area of health and social development to reduce health inequalities, but details of the implementation of intersectoral activities impacting on the social determinants of health (SDH), and what health and economic benefits these interventions have had has not previously been documented.

Objectives and methods

The first objective of this study is to identify which of the intersectoral actions launched by the Government of Mexico to reduce health inequalities have impacted on the SDH. The second objective is to quantify, in terms of health and economics, the benefits of these interventions. Intersectoral interventions that impact on the SDH were identified in two ways: a) discussion and consensus by the national Working Group on Social Determinants of Health; and b) review of the Health Sector Programme 2007–2012 and the specific action programme of the Ministry of Health for 2007–2012, focusing only on programmes that explicitly mention the social determinants of health and the participation of sectors other than health (intersectoral horizontal action).

The benefits of intersectoral interventions impacting on the social determinants of health were identified through a systematic review of the literature using the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This included original studies in Spanish or English published between 2000 and 2012. Scientific articles were retrieved from PubMed and the Cochrane Library. Grey literature was identified in POPLINE and on the Internet using the Google search engine. Study inclusion criteria were also used.

Results

This research identified four interventions that seek to improve the SDH in Mexico with the participation of sectors other than health, namely: 1) the 'Opportunities' Human Development Programme; 2) the Healthy Communities Programme; 3) the Road Safety Action Programme; and 4) the National Agreement for Healthy Food.

The ministries responsible for other sectors that collaborated with health included: the Ministry of Social Development, the Ministry of Education, the Ministry of Communications and Transport, the Ministry of Public Security, the Ministry of the Economy, the Ministry of Agriculture, Livestock, Rural Development, Fisheries and Food, the Ministry of Finance and Public Credit, the Ministry of Labour and Social Welfare and local governments.

Discussion

There is little documented evidence on the economic impact of these interventions based on improvements in health. It is therefore necessary to continue this line of evaluation and research in order to generate robust results regarding how health improvements of these programmes impact on the economy, and thereby to improve policy decisions and trade-offs. In short, no definitive statement can be made on whether intersectoral actions are producing economic benefits citing direct evidence from existing studies. Most of the evidence we found was on health or health equity impacts. Given that this evidence generally demonstrated positive health impacts for the population and, in many cases, for disadvantaged populations, one would have thought that, if these benefits could be accounted for in economic terms, the economic wealth and wealth distribution benefits would be substantial. But, unfortunately, we were only able to find inferential data documenting linkages between health and the economic impacts, and not a single study that was focused in a structured way on analysing the economic benefits from the health impacts of these programmes. Direct references to economic benefits were reported through the measurement of factors such as increased investment in education (which is also related to health), employment, and discretionary expenditure, in the case of the ‘Opportunities’ Human Development Programme (MDH). While current evaluations and studies provide evidence of interest for intersectoral collaboration, the strength of arguments for this work would be enhanced with further economic evaluations.

Standpoint of the Ministry of Health

The Mexican Ministry of Health recognizes that the health of a population is a reflection of conditions outside the health sector. This approach has been adopted in Mexico for more than a decade now, one powerful example being the ‘Opportunities’ Human Development Programme, which has achieved positive results in health and economic terms and has served as the methodological basis for a number of programmes to fight poverty around the world. Mexico is currently going beyond governmental intersectoral action, seeking instead to involve all stakeholders in a specific health issue. The National Agreement for Healthy Food spearheads this new generation of intersectoral programmes. We need to have more specific information on the impact that interventions have on health determinants; clearly, this is an area of opportunity to inform public policy-makers using scientific evidence, in which context the Mexican Ministry of Health could undertake to strengthen evaluation and planning of the intersectoral action it is implementing.

1 Introduction

1.1 The relationship between economics and health

The accumulation of human capital is a factor in national growth (1) because it is recognized that people with better health and education are more productive (2); but it has also been reported that the relationship applies in the other direction, i.e. national growth has positive effects on the health of the population, because it facilitates access to health services, reduces exposure to environmental risks, improves access to clean water and sanitation, and presents better opportunities for developing preventive behaviours (3).

Health can increase the wealth of a nation and its distribution in four ways: a) the healthy population is economically more productive; b) the use of preventive health services reduces health-care costs; c) health expenditures of one type are reallocated to other expenditures – health or otherwise – with different patterns of consumption or investment that capitalize more effectively on the multiplier effect, as seen from the standpoint of Keynesian theory (4)¹; and d) strengthening the synergy of policies for economic growth and health is an opportunity for greater efficiency in the use of resources that improve both health and economic growth. In the scientific literature there is evidence of what can be achieved; for example, it is estimated that increasing life expectancy at birth by 10% through investments and interventions to reduce the leading causes of premature death, could increase the economic growth rate by 0.35% per annum (2). In developing countries, a 40% increase in life expectancy correlates with an increase of 1.4% in gross domestic product (GDP)

per capita and malnutrition worldwide impacts negatively on global GDP by up to 4.7% (5).

1.2 Why does health also depend on policies outside the health sector?

The World Health Organization (WHO) Commission on Social Determinants of Health (CSDH) has concluded that health depends on several factors and policies outside the direct remit of health ministries. The Commission stressed that the unequal distribution of power, money and resources could not be addressed if the health sector alone is involved in designing and implementing public policies to mitigate health inequalities (5), and recommendations, therefore, need to be made to governments to improve basic conditions of housing, health services, education and working conditions, to reduce inequalities in access to participation in decision-making and resources, and to improve transparency and monitoring when measuring health inequalities (6).

There is a need for intersectoral action. Intersectoral action for health has been a priority for WHO since the Alma Ata Conference in 1978 that was convened with input from non-health sectors² in the formulation of health policies (5). Intersectoral action for health can be defined as the relevant sectors' coordinated activity to explicitly improve the health of people or influence the determinants of health; the activity is often coordinated by the health sector but there are exceptions, for example the security and transport

¹ Health workers spend their wages on goods and services in various sectors of the economy and public spending on health is often assigned to the purchase of health equipment and other goods and services from the private sector. The recipients of this spending, in turn, spend money through various sectors of the economy and so on.

² A sector is defined as a broad field of activity, for example, health, justice, education or employment. The sectors may involve a group of organizations, stakeholders and work activities that function within the limits defined by their terms of reference and the clients of the sector.

sectors can combine actions to reduce the number of road traffic injuries, which is a public health goal, but without the direct involvement of the health sector (5). Intersectoral collaboration can occur between sectors of government at central or regional level, and intersectoral actions can occur between bodies representing different sectors of the community. Governmental intersectoral action can occur horizontally (e.g. between the health and employment sectors) and/or vertically (e.g. between different levels of government within a sector) (7). Intersectoral health actions aim to raise awareness about health and the consequences of health equity in different sectors of society (5).

It is now increasingly recognized that collaboration between different sectors is an effective approach for managing the needs of people with noncommunicable diseases or mental illness (8,9), so there is consensus on the need for intersectoral actions and a 'Health in All Policies' (HiAP) or 'Equity in All Policies' approach to address the social determinants of health (7,10). However, at the same time, there is a recognized need to document more case studies of intersectoral actions at local level so as to provide information to policy-makers, administrators, managers and service providers on how this approach can be adopted in terms of development, implementation and management (11).

1.3 Social determinants of health and inequality in health

The 'determinants of health' is the term given to factors that influence health and well-being. Health is influenced by several factors including environment, genetics and lifestyle. The social determinants of health are those factors that focus on the economic and social conditions of individuals, which are mediated by environmental exposures and biological pathways, vulnerability and risky behaviour. Canadian scholars, who have a long tradition of work in this area, describe the social determinants of health as including factors such as: income and social status; social networks; education; employment and working conditions; social environment; physical environment; personal health practices; healthy child development; health services, gender and culture. The idea that the social and economic circumstances of individuals and groups are at least equally important as medical care is supported by abundant evidence (12).

Health inequality is defined as the difference in health outcomes between different population groups, including socioeconomic groups (13), i.e. the structural and systematic differences in health status between social groups (14). 'Health inequities' as measured by unfair 'inequalities in opportunities' is closely linked to the social determinants of health (15). In 2008 the CSDH published a study on the social causes of health inequalities, which concluded that health inequalities could not be explained by access to health services, or by income poverty alone; and that other factors influencing inequalities in opportunities for health are more related to political, economic and social forces the unfair distribution of power, money and resources: these too are the social determinants of health (6,16). Here we use the short-hand 'health inequalities' to refer to unfair inequalities in opportunities for health, even though elsewhere this may be described by the term 'health inequities'.

1.4 Health inequalities in Mexico

Mexico has made significant progress in the field of health in recent years, reflected in the increase in life expectancy at birth and reduced rates of maternal and infant mortality, yet there are persistent health differences among regions, and in ethnic and socioeconomic groups. In the municipality with the lowest Human Development Index (HDI), located in the state of Guerrero, the mortality rate in children under one year is 66.9 per thousand live births, while the locality with the highest HDI, located in Mexico City, has a rate of 17.2 (17). The state of Chiapas had a maternal mortality rate of 96.8 in 2008, whereas in Nuevo León the rate was 30. Regarding mortality rates for communicable diseases in the same year, Chiapas had a rate of 78.6 deaths and Coahuila a rate of 41.1 (18). A study carried out in 713 municipal micro-regions indicated that, in the period 1990–1996, life expectancy at birth was 58 years in municipalities with low HDI, while it was 71 years in municipalities with a higher HDI (19).

It has been estimated that the infant mortality rate varies from nine deaths per thousand live births in the richest municipalities to 103 in the poorest. Indigenous communities have an infant mortality rate that is 58% higher and life expectancy is five years lower compared to the national average, and 10 years lower than in Mexico City (20).

Analysing the population by income deciles, the infant mortality rate in the poorest decile is 38 per thousand compared with 19.7 per thousand in the richest decile. The average height of an adult in the poorest decile is 1.53 metres; in the richest decile it is 1.61 metres (17).

Regarding health resources, according to the National Health Survey (ENSA) 2000, the percentage of assisted births in the 386 municipalities with very high levels of poverty was slightly over 36%; by contrast, in the 247 most affluent municipalities, coverage by medical units was nearly 94% (17). Based on state indicators, it is estimated that the proportion of women who give birth in hospitals varies from less than 10% in the poorest municipalities to just over 80% in municipalities with higher income. A

similar pattern applies to health providers, for example, in low-income municipalities there are five physicians per 100 000 inhabitants, whereas in higher income municipalities the ratio is 20 to 100 000 (21).

The above data help explain why inequality, in terms of health, access to health services and financing, is a priority of the Mexican Government. Different interventions in health and social development have been launched in Mexico to reduce health inequalities, including intersectoral ones. The details of implementation of intersectoral activities impacting on the social determinants of health has not yet been documented, nor has the question been asked about the health and economic benefits these interventions have had. This is the focus of this study.

2 Objectives and methods

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using the Google search engine. Appendix 1 shows in detail the keywords that were used to retrieve the studies.

2.1 Inclusion criteria

The following inclusion criteria were applied: a) the study analyses a previously identified intersectoral intervention; b) using empirical data, the study shows the results of an intersectoral intervention with health or economic returns; c) the study was published between January 2000 and October 2012; d) the study was published in Spanish and English. Studies were excluded if: a) they were not based on empirical data; and b) they examined only intermediate results (for example, the manner in which the intersectoral intervention was carried out).

2.2 Data extraction

The following data were extracted from the studies: a) the objective; b) the level of the intervention (national/local); c) the measurement methodology; d) the sectors involved; and e) the principal results (Appendix 2 shows the template used).



3 Results

Four intersectoral programmes impacting on the social determinants of health were identified: 1) 'Opportunities' Human Development Programme; 2) Healthy Communities Programme; 3) Road Safety Action Programme; and 4) National Agreement for Healthy Food.

3.1 Income and social status: 'Opportunities' Human Development Programme

The 'Opportunities' Human Development Programme was launched in 1997 as the Education, Health and Nutrition Programme (PROGRESA) (22). The Opportunities programme is a cash transfer programme. The following requirements apply: 1) children between eight and 18 years of age must be in full-time education and maintain an attendance rate above 85%; 2) all members of the family have access to a basic health package and must have regular check-ups at a health centre; 3) women receiving the money must attend health presentations; 4) pregnant women must attend five antenatal classes, and children (under 24 months) and mothers must take nutritional supplements. Postpartum medical visits are mandatory (23). The programme began as an effort to raise the living standards of poor households by improving their health and nutrition, and by providing educational opportunities for children (24). It aims to promote the development of skills related to the education, health and nutrition of families benefiting from the programme and thus help break the intergenerational cycle of poverty (25). The programme achieves national coverage in areas where health services are accessible and possess adequate treatment capacity, and where

education services are accessible, thus allowing all components of the programme to operate (26). The areas in which it operates are selected on the basis of the social deprivation index developed by the National Council for the Evaluation of Social Development Policy and the poverty index developed by the National Population Council. Families whose per capita income is estimated to be less than the minimum welfare floor are eligible to enter or re-enter the programme (26).

In its educational component, the programme focuses on supporting the children of beneficiary families to ensure their enrolment, retention and regular attendance at elementary, secondary and high school. This component provides education grants and help with purchasing school supplies; in addition, in the case of upper secondary education grants, a monetary incentive is made available to encourage students to complete this level of education (26).

The health component operates under three strategies: a) free provision of the Guaranteed Basic Health-care Package, a benefit based on the National Health Card system; b) promotion of better nutrition among the target population; and c) promotion and improvement of self-health care among beneficiary families and in the community (26).

The food component provides monthly direct monetary support to beneficiary families to help them to improve the quantity, quality and diversity of their food intake, and thereby improve their nutritional status (26).

The direct financial support and educational grants are provided every two months, in cash and individually to the programme beneficiaries. The

amount received by the beneficiary families varies according to the number of family members under the age of nine, the education grant recipients and their school grades, and the number of older adults in the household (see Table 1) (26).

Table 1. Maximum amount of financial support that a beneficiary family can receive per month

Financial support	Mexican peso
Food	225
Energy	60
Nutrition for a healthier lifestyle	120
Education grants	1155
Support costs	1560
Maximum amount per month	3120

Source: (26).

The Opportunities programme is an intersectoral intervention spearheaded by the Ministry for Social Development (SEDESOL) with additional input from the Ministry of Education (SEP), the Ministry of Health (MOH) and the Mexican Social Security Institute (IMSS-OPORTUNIDADES) (27).

Table 2 shows the economic impact of Opportunities, according to the duration of exposure to the programme. In the short term (up to two years), the programme reduces the financial burden of health expenditure on households. In the medium term (three to six years), it encourages households to increase their consumption and facilitates self-help through the creation of microenterprises. But in the long term (at least seven years), it has been concluded that the programme does not encourage household participation in microenterprise activities, nor is there a correlation with greater

Table 2. Economic impacts of the Opportunities Programme, by duration of programme exposure

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Short term (up to 2 years)	28	Urban	Quantitative	<p>There is a significant favourable difference in the case of women, suggesting that health expenditure is less of a financial burden for households in the programme. It was reported that the intervention group spent 69.6 Mexican pesos, while the figure for the comparison group was 234.2 Mexican pesos.</p> <p>Adult women in the programme reported out-of-pocket expenditure of 1989 Mexican pesos, compared with 4636 Mexican pesos among women outside the programme. The situation was very similar for men in the programme who spent on average 1800 Mexican pesos, while the comparison group spent 7264 Mexican pesos.</p>
Medium term (3–6 years)	29	Rural	Quantitative	<p>The results indicate that beneficiary households directly consume 75 centavos of every Mexican peso transferred, and invest or save the rest, which may indicate that five and a half years after receiving the benefits of the Opportunities programme, the households concerned can achieve a permanent increase in their level of consumption of approximately 22%.</p> <p>On average, the households concerned are 33% more likely to engage in activities consistent with a microenterprise.</p>
Long term (at least 7 years)	30	Urban/rural	Quantitative	<p>The programme does not correlate with the number of business transactions or jobs created.</p> <p>Analysis suggests that the volume of beneficiaries is not a variable in the increased dynamism of the local economy.</p>
Long term (at least 7 years)	31	Rural	Quantitative	<p>Opportunities does not promote participation in microentrepreneurial activities.</p> <p>The programme does not encourage households to save.</p>
Long term (at least 7 years)	32	Rural	Quantitative	<p>The results show that the programme has a positive impact on the likelihood of employment for all people living in areas where the programme has been operational for more than three years, but none of these impacts is statistically significant.</p> <p>They are positive effects on employment in so far as beneficiaries possess a higher level of education, given that individuals with more education are more likely to be in employment and earn higher wages.</p>
Long term (at least 7 years)	33	Urban/rural	Quantitative	<p>Through a simulation, we concluded that the current investment in the human capital of young people by the programme would result in an average increase in future incomes.</p>

dynamism in the local economy, although it does boost the chances of being employed.

In total, 376 documents were identified as being relevant to the Opportunities programme, of which 137 were reviewed. Of these, 73 documents did not meet the inclusion criteria and 14 could not be retrieved. Finally, 50 documents were included in the analysis (Appendix 3).

Regarding the health impacts of the Opportunities programme presented in Table 3, over the short term, the programme increases the frequency of preventive consultations in the 0–5 years age group, reduces the number of days spent in hospital in the 6–18 years age group, and increases the frequency of preventive consultations in the 19–49 years age group. When considering household structure, Opportunities correlates with a decrease in the

number of days lost through illness and disability, use of private health services, and increased use of preventive and curative services. Opportunities beneficiary households have higher caloric intake. Children aged less than six months have a higher mean height and weight; an increase in basic physical activities is observed in older adults. Programme beneficiaries undergo more antenatal procedures. The Opportunities programme does not correlate with duration of breastfeeding, or with scores on language and cognitive scales. Opportunities recipients have a higher rate of caesarean delivery.

In the medium term, children demonstrated better motor skills, the weight of neonates increased and the incidence of low-birth weight decreased. The Opportunities programme was associated with decreased prevalence of obesity, better

Table 3. Health impacts of the Opportunities Programme, by duration of programme exposure

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Short term (up to 2 years)	28	Urban	Quantitative	<p>The number of pre-school children (0–5 years) who attended preventive consultations is three times higher among programme participants. The attendance rate was 72% for children and 68% for girls in the intervention group, compared with 18% and 21%, respectively, in the comparison group.</p> <p>Regarding the required number of days in hospital, individuals aged between 6 and 18 in the intervention group required 3.9 days compared with 8.8 days in the control group.</p> <p>In the 19–49 age group, between 4% and 8% of the comparison group attended preventive consultations, compared with between 26% and 38% in the intervention group. No difference was observed with regard to the use of hospital facilities.</p> <p>The percentage of older adult males in the intervention group who underwent blood glucose and blood pressure tests was 42% and 53%, respectively; the percentages in the comparison group were 33% and 38%, respectively.</p> <p>Women outside the programme required, on average, 11.3 days in hospital, compared with just 7.8 days among the group of programme beneficiaries.</p>
Short term (up to 2 years)	34	Urban	Quantitative	Children aged less than 6 months before implementation of the programme measure, on average, 1 cm more and weigh on average 0.5 kg more.
Short term (up to 2 years)	35	Rural	Quantitative	Early (as opposed to late) exposure to Opportunities (i.e. 18 months apart) is associated with fewer behavioural problems, but there is no significant difference in height, body mass index, language or cognitive scales.
Short term (up to 2 years)	36	Rural	Quantitative	Infants in the intervention group (PROGRESA) aged less than 6 months grew 1.1 cm more compared with children in the comparison group.
Short term (up to 2 years)	37	Rural	Quantitative	PROGRESA beneficiary households increased caloric intake by 7.1% compared to control households.
Short term (up to 2 years)	38	Rural	Quantitative	Opportunities recipients had a higher rate of caesarean deliveries paid for by social security (24% compared with 5.6% of non-beneficiaries) and in other State-run medical facilities (19.3% compared with 9.5%).
Short term (up to 2 years)	39	Rural	Quantitative	Opportunities beneficiaries underwent 12.2% more antenatal procedures than non-beneficiaries.
Short term (up to 2 years)	40	Urban	Quantitative	Infants less than 6-months old in the intervention group (Opportunities) grew 1.5 cm and weighed 0.76 kilos more than those in the comparison group.

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Short term (up to 2 years)	28	Urban	Quantitative	<p>In adults aged 18–49, attendance at preventive consultations was about 20% higher in the group affiliated with Opportunities than in the comparison group.</p> <p>Considering the household structure, there was a decrease of 6.1 sick days among individuals aged between 6 and 15. Regarding disability days, the results were 5.7 and 6.2 fewer days for individuals aged between 6 and 15, and 16 and 49, respectively.</p> <p>A 4% increase in the level of basic and moderate physical activity was observed among adults over 50.</p>
Short term (up to 2 years)	41	Urban	Quantitative	<p>The impact assessment indicated no statistically significant differences in the duration of breastfeeding between the two samples (i.e. with or without Opportunities) in 2002. In 2004, there was a trend towards a shorter duration of breastfeeding in the group affiliated with Opportunities. Although there was no strong evidence that the programme resulted in a shorter duration of breastfeeding, it was observed that the implementation of Nutrisano is having a negative impact on this practice.</p>
Medium term (3–6 years)	28	Rural	Quantitative	<p>Families required 2.9 more preventive and curative consultations, an increase of 35%.</p> <p>It is thought that there is increased use of health services and that this increase is accompanied by a reduction in the use of private health services.</p> <p>Impact on sick days and inability to perform daily activities shows that, in areas affiliated with the programme in 1998, there was a reduction of 20% in the number of sick days among children aged 0–5 years, and of 22% in the age group 16–49 years, compared with the comparison group outside the programme (control 2003).</p> <p>The observed reduction in disability days for the age group 16–49 years is 18% in relation to the comparison group.</p>
Medium term (3–6 years)	41	Rural	Quantitative	<p>It is concluded that boys in the treatment group had significantly improved motor skills (15%) in relation to the control group; in girls, the improvement was 10%.</p>
Medium term (3–6 years)	42	Rural	Quantitative	<p>On average, Opportunities is associated with increased birth weight of 127.3 grams and a reduction in the incidence of low-birth weight of 4.6% (less than 2500 grams).</p>
Medium term (3–6 years)	43	Rural	Quantitative	<p>In 2000, women benefiting from Opportunities were more likely to use modern contraceptive methods than women in the control group.</p>
Medium term (3–6 years)	44	Rural	Quantitative	<p>Opportunities beneficiaries increased their rate of attendance at health centres by 25.6%.</p>
Medium term (3–6 years)	45	Rural	Quantitative	<p>The results show that repeated cash transfers to households is associated with increased body mass index, higher blood pressure and higher prevalence of overweight in adults.</p>
Medium term (3–6 years)	46	Rural	Quantitative	<p>Opportunities is associated with a lower prevalence of obesity, high blood pressure and better self-reporting of health in adults.</p>
Medium term (3–6 years)	47	Rural	Quantitative	<p>Repeated cash transfers were associated with increased size, lower prevalence of stunting, lower body mass index and a lower prevalence of overweight.</p>
Medium term (3–6 years)	48	Rural	Quantitative	<p>Beneficiary children have lower levels of cortisol in saliva compared with non-beneficiaries.</p>
Medium term (3–6 years)	49	Rural	Quantitative	<p>An increase in consultations to monitor nutritional status was observed in a range of 30–60% for the age group 0–2 years, and 25–45% in the age group 3–5.</p> <p>Prior to the implementation of Opportunities, people consulted a physician 0.65 times per person per year; after implementation, the average number of consultations increased to 2.09.</p>
Medium term (3–6 years)	50	Rural	Quantitative	<p>The prevalence of obesity was 24% in the control population and 20% in the intervention population. Opportunities also contributed to a 54.4% reduction in the average body mass index in the relevant group.</p>
Medium term (3–6 years)	51	Rural	Quantitative	<p>Participation in the programme was associated with a 10% decrease in aggressive symptoms/opposition but was not associated with significant decreases in symptoms of anxiety/depression.</p>
Medium term (3–6 years)	52	Rural	Quantitative	<p>Women in the programme experienced fewer symptoms of depression compared with women in the control group (CES-D score 16.6 ± 10.2 compared with 18.6 ± 10.2).</p>
Medium term (3–6 years)	53	Rural	Quantitative	<p>As regards family planning, pills and injections were the most well known family-planning methods among women in the treatment group of the sample (80.4% and 73.8%, respectively).</p>
Medium term (3–6 years)	54	Rural	Quantitative	<p>Children benefiting from education grants had a 1% reduction in the age of entry to elementary education and a 9% increase in school grades completed.</p>

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Medium term (3–6 years)	55	Rural	Quantitative	<p>It was found that knowledge of modern contraceptive methods among women in the first intervention group (1998) was 5.93% higher than in the control group (2003), and 4.72% higher among women in the programme in 2000 (later intervention group) in relation to the control group.</p> <p>Regarding antenatal care, women in the intervention group attended, on average, 1.5–1.86 more antenatal consultations than women in the control group.</p>
Medium term (3–6 years)	56	Rural	Quantitative	<p>With regard to the number of medical consultations, individuals outside the programme sought treatment 43% less than participants.</p> <p>Women outside the programme had Pap tests 61% less frequently than women participating in the programme.</p>
Medium term (3–6 years)	28	Rural	Quantitative	<p>15% of teenagers reduced their consumption of tobacco in the group that entered the programme in 1998, while in the group that entered the programme in 2000, the proportion was 13% (on average, 14% in both groups).</p> <p>In the groups of young people who have been in the programme since 1998, the weekly consumption of soft drinks was reduced by half a unit compared to young people in the control group who, on average, reported consuming about three units of soft drinks.</p> <p>Teenagers who entered the programme in 2000 spent 20% less on junk food than teenagers in the control group.</p>
Long term (at least 7 years)	57	Rural	Quantitative	<p>There is a non-significant trend towards greater stature in children in the group that joined the programme later on, but there is no correlation when the exact age of the child is taken into account using the Z-scores of height for age.</p> <p>Opportunities is a protective factor against weight gain in children from the poorest families aged 0–6 months at the start of the programme.</p> <p>The programme has had a significant impact on reducing the incidence of anaemia.</p> <p>No evidence was found in the 2007 Rural Households Assessment Survey of significant impacts on human capital indicators for schoolchildren in the areas of cognition, nutritional status and educational attainment.</p>
Long term (at least 7 years)	58	Rural	Quantitative	<p>No significant differences were observed between exposure groups, or between sexes, with regard to the consumption of energy-dense foods (junk food) among individuals aged between 14 and 18.</p>
Long term (at least 7 years)	58	Rural	Quantitative	<p>In individuals aged 14–18 years, the proportion of participants who reported smoking tended to be lower among groups with higher exposure to the programme, among both men and women. Alcohol consumption was also lower in the groups with greater exposure to the programme. However, drug use at some point in a person's life was higher in the group with the more exposure to the programme.</p> <p>In individuals aged 14–18 years, the percentage who reported having had sex was lower in the group with greater exposure in the case of women (2.4% compared with 8.0% in the less exposed group), with a minor difference in the case of men (2.8% as against 3.3%, respectively).</p> <p>In individuals aged 14–18 years, condom use was higher in the higher exposure groups in both the first and most recent sexual encounters, with a greater difference for most recent sex.</p>
Long term (at least 7 years)	59	Rural	Quantitative	<p>There is no evidence that Opportunities increases alcohol and tobacco consumption as a result of the increased income derived from programme transfers.</p>
Long term (at least 7 years)	60	Rural	Quantitative	<p>On average, women beneficiaries with longer exposure to the Opportunities programme reported 2.1% more antenatal care compared to localities with less exposure.</p>
Long term (at least 7 years)	61	Urban/rural	Quantitative	<p>Being an Opportunities beneficiary is a protective factor against anaemia.</p>
Long term (at least 7 years)	62	Rural	Quantitative	<p>Opportunities is associated with a reduction in anaemia.</p>
Long term (at least 7 years)	63	Rural	Quantitative	<p>Opportunities has a protective effect of between 3 and 4 percentage points on the health of children aged under 24 months (with lower rates of morbidity than non-beneficiaries, principally with regard to cough and diarrhoea).</p>

knowledge of family planning methods, increased use of antenatal care and increased Pap testing in addition to lower prevalence of high blood pressure and obesity in adults. Participation in Opportunities reduces levels of cortisol in the saliva of children, and incidence of aggressive behaviours. In households, Opportunities is associated with an increase in the use of preventive and curative health services, a decline in the use of private health services, and a reduction in the number of sick and disability days. Teenagers consume less soda, junk food and tobacco. An investigation concluded that Opportunities is associated with increased body mass index (BMI), higher levels of blood pressure and higher prevalence of overweight in adults.

In the longer term, Opportunities is associated with lower rates of anaemia and decreased morbidity in children under 24 months. Teenagers consume less alcohol and drugs, and there is no evidence that the Opportunities programme increases consumption of alcohol and tobacco as a result of increased income from conditional transfers. In the 14–18 age group, the programme was associated with a lower rate of first sexual encounters and increased condom use. Being a beneficiary of the programme is a protective factor for anaemia, cough and diarrhoea. The Opportunities programme is not associated with increased height in children, or with a higher score

in cognitive tests or with educational achievement. Table 4 shows the other effects of the Opportunities programme, according to exposure time. In the short term, Opportunities reduces migration to the United States of America (USA), but has no effect on domestic (or internal) migration. There is an increase in school enrolment rates and a decrease in the number of children dropping out of school. Fewer children repeat a grade and more women are enrolled in high school. In the short term, although school attendance has increased, child labour has not been reduced, nor has there been a significant change in the form of employment or the wages of both men and women.

In the medium term, there is also an increase in school enrolment. Fewer children repeat a grade and more women are enrolled in high school. In addition, children with the Opportunities programme start school at a younger age.

In the long term, Opportunities grant recipients and ex-recipients declare full-time education as their primary occupation, stay in school longer and obtain higher scores on mathematics tests, but the programme has no correlation with enrolment in higher education. The programme is also associated with improvements in housing conditions, such as the availability of piped drinking water and toilet or latrine facilities.

Table 4. Other impacts of the Opportunities Programme, by duration of programme exposure

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Short term (up to 2 years)	64	Urban	Quantitative	The Opportunities programme reduces migration to the USA, but does not affect internal migration.
Short term (up to 2 years)	65	Urban/rural	Qualitative	Although the rate of long-term school attendance has improved substantially, child labour (up to 14 years of age) does not appear to have decreased. There has been no significant change in the form of employment or the wages of men or women, from which it may be inferred that vulnerability is reduced after joining the programme.
Short term (up to 2 years)	66	Urban	Quantitative	The Opportunities programme is associated with a 4% increase in enrolment in the school year 2002–2003. Opportunities is associated with a 10.1% increase in enrolment in the first grade of high-school education, using enrolment for the school year 2000–2001 as a basis. Due to Opportunities, 6001 boys and 8378 girls who formerly dropped out of elementary education no longer do so. Due to Opportunities, 16 988 boys and 18 673 girls who formerly repeated a school grade at elementary level no longer do so. Before Opportunities, 92 women enrolled in the first grade of secondary school for every 100 men. This number increased to 95 following the implementation of the Opportunities.

Duration of exposure to the programme	Reference	Scope	Methodology	Outcome
Short term (up to 2 years)	66	Rural	Quantitative	<p>The Opportunities programme is associated with a 24% increase seen in enrolment in the school year 2002–2003.</p> <p>Opportunities is associated with an increase of 84.7% in enrolment in the first grade of high school, using enrolment for the school year 2000–2001 as a basis..</p> <p>Due to the Opportunities programme, 17 031 boys who formerly dropped out of elementary school no longer do so.</p> <p>Due to the Opportunities programme, 10 520 boys and 14 265 girls who formerly repeated a school grade at elementary level no longer do so.</p> <p>Before Opportunities, 83 women enrolled in the first grade of secondary school for every 100 men. This number increased to 96 after the implementation of Opportunities.</p>
Medium term (3–6 years)	68	Urban/rural	Quantitative	The increase in enrolment in secondary schools affiliated with the Opportunities was 23% compared with secondary schools outside the programme.
Medium term (3–6 years)	69	Urban/rural	Quantitative	In 2003, Opportunities increased the proportion of boys aged between 12 and 14 enrolling in secondary school by 41.5% and 32.9%, respectively.
Medium term (3–6 years)	70	Urban/rural	Quantitative	<p>Children aged 0–2 years in the programme are more likely to enrol in school at an earlier age, to progress through school and complete more grades.</p> <p>Boys and girls aged one year in the programme are 28% and 44.1%, respectively, more likely to progress through school (i.e. to complete at least five school grades in six years).</p>
Medium term (3–6 years)	71	Urban/rural	Quantitative	<p>In the school year 2002–2003, Opportunities succeeded in increasing enrolment rates of 6-year-old children by 7.7% for girls and 13.3% for boys.</p> <p>In 2003, Opportunities succeeded in increasing enrolment among young people aged between 15 and 18 by 10.9%.</p>
Long term (at least 7 years)	72	Rural	Qualitative	Grant recipients and ex-recipients declare full-time education as their principal occupation.
Long term (at least 7 years)	73	Rural	Quantitative	<p>Individuals who have benefited from Opportunities for almost 10 years have 0.9 more school grades than individuals outside the programme.</p> <p>Opportunities was found to have no impact on enrolment in higher education, which continues to be extremely low in this population (around 2%), with no difference between the various intervention and control groups.</p> <p>In mathematics tests, the group of individuals affiliated with Opportunities since 1998 has scored 10% higher marks in mathematics tests than the group that has been in the programme since 2003.</p>
Long term (at least 7 years)	58	Rural	Quantitative	The proportion of individuals aged 14–18 attending school is higher among those with more time to participate in the programme, which is consistent both with a higher average number of years of schooling and with the percentage of individuals with age-appropriate education.
Long term (at least 7 years)	74	Rural	Quantitative	When compared with all the other students in the country, programme beneficiaries obtained the lowest scores in mathematics and Spanish.
Long term (at least 7 years)	75	Rural	Quantitative	Analysis suggests that Opportunities may increase the possibility of enrolment in elementary education.
Long term (at least 7 years)	76	Urban/rural	Quantitative	The presence of the programme in a given area, measured as the percentage of beneficiary households, increases the likelihood of improved living conditions, both in terms of piped drinking water and sanitation facilities and latrines.

3.2 Social networks and social environment: Healthy Communities Programme

The Healthy Communities Programme was launched in 2006. It has been introduced in municipalities with communities of between 500 to 2500 inhabitants. It is an initiative to promote the health of Mexicans through social and educational activities that raise public awareness of health, encourage healthy lifestyles as well as community action and social participation for a better quality of life (77). The municipalities that meet the inclusion criteria submit public health improvement projects to the programme selection committee, which evaluates the projects and decides on the winning entry. The municipality that wins receives funding and technical support to carry out the project (78).

The support given by the programme to each approved project is up to 50% of its total cost, to a maximum of 500 000 Mexican pesos. The beneficiary municipality is required to fund the balance of the project (79).

The principal objective of this programme is to promote and strengthen municipalities with a view to addressing specific problems in the area of health and, in partnership with organized groups in society, to encourage their participation in the creation of healthy environments (80). Its specific objectives are to: develop policies to improve public health; support municipal projects related to public health; promote education and health communication; strengthen the capacity of the health workforce; and to monitor and evaluate the progress of the programme (78).

The Healthy Communities Programme is an intersectoral initiative of the Federal Ministry of Health, State Health Services and the governments of the municipalities with communities of between 500 and 2500 inhabitants (80,81).

In total, 156 documents were identified as being relevant to the Healthy Communities Programme, of which 31 were reviewed. Of these, 26 documents did not meet the inclusion criteria; five were included in the analysis (Appendix 4).

Table 5 shows the economic results of the Healthy Communities Programme; qualitative research indicates that the programme has not only benefited the population in health terms, but has also strengthened the local economy.

The health outcomes of the Healthy Communities Programme include a decrease in the incidence of cases of dengue and gastrointestinal disease, an increase in the number of women receiving antenatal care, and a consequent decrease in the number of maternal deaths (Table 6). The number of vaccinated cats and dogs also increased. People's perception is that the projects supported by the programme promote self-care in the local area.

Other results associated with the Healthy Communities Programme include improved availability of water and better local cooperation in other health programmes (e.g. folic acid and dengue control) (Table 7). Generally, people consider that the projects undertaken by the programme helped to address some need in the community.

Table 5. Economic results of the Healthy Communities Programme

Reference	Scope	Methodology	Outcome
80	Rural	Qualitative	An interview with a municipal chief executive indicated that the programme has not only benefited the population in health terms, but has also strengthened the municipal economy.

Table 6. Health results of the Healthy Communities Programme

Reference	Scope	Methodology	Outcome
77	Rural	Quantitative	95.9% of respondents stated that the project promotes self-care in the community.
81	Rural	Qualitative	The number of cases of gastrointestinal disease has decreased.
82	Rural	Qualitative	The number of cases of dengue is reported in the community of La Misa Sonora has decreased, due to refuse collection campaigns.
83	Urban/rural	Qualitative	In José María Morelos municipality, Quintana Roo, more women attend medical check-ups during pregnancy, which could have an impact on the number of maternal deaths. In Jesús María municipality, Aguascalientes, the number of vaccinated cats and dogs has increased by approximately 700%. In Filomeno Mata and Temapache municipalities, Veracruz, maternal mortality has been reduced and the number of antenatal consultations for pregnant women has increased.

Table 7. Other results of the Healthy Communities Programme

Reference	Scope	Methodology	Outcome
80	Rural	Qualitative	90.7% of respondents considered that the project undertaken had helped to address some need in the community, 8.1% considered that it had not, and 1.2% expressed no opinion.
81	Rural	Qualitative	The water supply is more reliable. There has been more community cooperation in other programmes promoted by the Ministry of Health, e.g. dengue control and folic acid intake.

3.3 Personal health practices: Road Safety Action Programme

The Road Safety Action Programme aims to reduce the number of deaths caused by motor vehicle traffic accidents in Mexico, particularly in the population aged 15–29, by promoting road safety, accident prevention and improving the treatment of victims. The programme is headed by the Ministry of Health, but also involves the Ministry of Communications and Transport (SCT) and the Ministry of Public Security (SSP) (84).

Road Safety Mexican Initiative (IMESEVI) was launched in 2008 under the Road Safety Action Programme, as a multisectoral effort intended to reduce deaths and injuries caused by accidents on the roads, through an evidence-based intervention model, involving a holistic and a multisectoral approach (85). This includes social communication strategies, forums and workshops on road safety,

promoting changes to existing legal frameworks, involving those responsible for road safety and the general population through training, road safety audits and the preparation and distribution of information and promotional material on road safety (86). The Pan American Health Organization (PAHO), state governments and civil society are all involved in IMESEVI (87).

In total, 35 documents were identified as being relevant to the Road Safety Action Programme, of which 11 were reviewed. Of these, 10 documents did not meet the inclusion criteria. One document was included in the analysis (Appendix 5).

Table 8 shows the results obtained by the Road Safety Action Programme. The use of seat belts and child restraint systems in motor vehicles has been successfully promoted.

Table 8. Other results of the Road Safety Action Programme

Reference	Scope	Methodology	Outcome
86	Urban	Quantitative	<p>IMESEVI has increased the use of restraining devices (seat belts and child restraint systems) by 12%.</p> <p>IMESEVI has increased the use of child restraint systems by 48%.</p> <p>IMESEVI has increased the use of restraining devices in taxis by 28%.</p> <p>IMESEVI has increased the use of child restraint systems in station wagons by 56%.</p>

3.4 Development of healthy children and gender: National Agreement for Healthy Food

The National Agreement for Healthy Food (ANSA) was launched on 25 January 2010 by the ministries of health and education, with extensive input from other representatives such as: the Ministry for Social Development; the Ministry of the Economy; the Ministry of Agriculture, Livestock Farming, Rural Development, Fisheries and Food; the Ministry of Finance and Public Credit; the National Water Committee; and the Ministry of Labour and Social Security. The food industry and academia, represented by the National Academy of Medicine, are also associated with this initiative (88,89).

ANSA has the following objectives:

- ① to promote physical activity in the population in schools, workplaces, the community and recreational settings in collaboration with the public, private and social sectors;
- ② to increase availability, accessibility and consumption of plain drinking water;
- ③ to reduce consumption of beverages with a high sugar and fat content;
- ④ to increase daily consumption of fruit and vegetables, pulses, whole-grain cereals and fibre by increasing the availability and accessibility of these foods and promoting their consumption;
- ⑤ to improve the capacity of the population to make informed decisions about proper diet through helpful and easy-to-understand labelling and the promotion of nutritional and health literacy;
- ⑥ to promote and protect exclusive breastfeeding up to the age of six months, and to encourage appropriate complementary feeding from six months onwards;

- ⑦ to reduce the consumption of food containing added sugars and other caloric sweeteners by increasing the availability and accessibility of food containing no or fewer sweeteners;
- ⑧ to decrease the daily consumption of saturated fats and reduce to a minimum the intake of industrial trans fats;
- ⑨ to make the population aware of recommended portion sizes when preparing food at home, and to increase the accessibility and availability of processed food in such a way that awareness of this issue is raised, and to introduce smaller portions in restaurants and food vending outlets; and
- ⑩ to decrease the daily intake of sodium by reducing amounts of added sodium and improving the availability and accessibility of low sodium or sodium-free products.

ANSA is therefore a comprehensive policy designed to prevent overweight and obesity (88,90).

ANSA recognizes that intersectoral collaboration is essential to effectively improve the supply of and access to food and beverages that ensure proper nutrition, and therefore, in their respective areas of competence, the signatory ministries have conducted awareness-raising and outreach campaigns in the public, private and community sectors that will help to standardize criteria for the supply and consumption of recommended food and beverages in elementary schools (90).

In total, 79 documents were identified as being relevant to ANSA, 18 of which were reviewed. None of the documents met the inclusion criteria (Appendix 6). Therefore, this research could find no published documents concerning the economic, health or other impacts of ANSA.



4 Discussion

This research identified four intersectoral, horizontal interventions (e.g. between the health sector and the communications sector) that seek to improve the SDH in Mexico with the participation of sectors other than health, namely: 1) the 'Opportunities' Human Development Programme; 2) the Healthy Communities Programme; 3) the Road Safety Action Programme; and 4) the National Agreement for Healthy Food.

The ministries in other sectors that have collaborated with the health sector are those responsible for social development; education; communications and transport; public safety; the economy; agriculture, livestock farming, rural development, fisheries and food; the economy and public credit; labour and social security; and local governments.

The most well-documented intervention is the 'Opportunities' Human Development Programme. In terms of economic evidence, Opportunities shows promising results in the short (up to two years) and medium term (three to six years), but long-term (at least seven years) studies conclude that the intervention has no impact on the growth of the local economy. It should be noted that there is only a single study of economic growth, so this conclusion is possibly biased. Furthermore, the improvement of the local economy is not a primary objective of the programme. In health terms, Opportunities has positive short-, medium-

and long-term impacts, so we can conclude that this programme positively impacts the level of health of individual beneficiaries. However, it is important to note that no research has quantified these specific health benefits in economic terms. On the other hand, economic impacts or benefits are seen as separate (see Table 2). The results suggest that, in the long term, Opportunities can improve living conditions, which may well have an impact on the health of the population and in turn have a significant economic impact.

With regard to the other interventions, evidence of an economic impact was found only in the case of the Healthy Communities Programme. Qualitative research, in the form of an interview with the chief executive officer of the municipality, concludes that this intervention has strengthened the local economy. In terms of health, the research found that the programme had benefited the population; in addition, it had reduced water shortages and improved the level of community cooperation with other programmes run by the Ministry of Health. The results suggest that the programme has been beneficial to the target population, but there is scant robust evidence.

In the case of the Road Safety Action Programme, the only impact supported by the evidence was that on health: this was found to be positive. These impacts were not quantified in terms of economic impacts.

In the case of the National Agreement for Healthy Food, the research found no evidence of any impact.

The review reflects the state-of-the-art on the impacts of intersectoral interventions in Mexico that improve the social determinants of health and how they are evaluated. The economic impact of these interventions is extremely limited, so the findings of this research should not be taken as conclusive: further research is needed on the economic impact of these interventions, or on translating their health and other effects into economic terms. For example, with regard to Opportunities, there are a number of studies that examine the health effects of this programme; if these effects could be quantified economically, it might be supposed that their impact would be considerable. It is, therefore, advisable to continue this line of research in order to obtain reliable results on the impact of these interventions. Currently, it is not possible to speculate on whether intersectoral interventions are achieving economic

benefits. It was not possible to assess the cost-effectiveness of the intersectoral interventions owing to the scarcity of literature on their impact, i.e. no study addressed this aspect. Although it is suggested that intersectoral interventions might be cost-effective (91) this needs to be demonstrated empirically.

Most of the evidence found by this research concludes that intersectoral interventions produced a benefit for the beneficiary population, and therefore intersectoral action is necessary to address the social determinants of health (7,10). Moreover, these interventions can be more efficient and effective than initiatives undertaken by one sector alone.

A potential flaw in the research is that even though the review was carried out methodically, it could not be completely ruled out that some documents that might have been useful for the analysis could not be identified. In the case of the Opportunities programme, 14 documents could not be retrieved.

5 Position of the Ministry of Health on intersectoral public health interventions relating to the social determinants of health

The Mexican Ministry of Health recognizes that the health of a population is a reflection of conditions outside the health sector (92). For example, the ability to protect the health of a population is affected by the behaviour patterns of physical activity, diet, tobacco and alcohol consumption, and also the capacity of the government to handle environmental contamination, and the need to satisfy communication and transport needs. Recognizing that the health of a population depends on many variables that go beyond the health sector, it is necessary to design and plan genuinely intersectoral public health policies that generate synergies and involve all stakeholders to improve the health of the population.

Mexico has pursued this approach for more than a decade, the most conspicuous example being the 'Opportunities' Human Development Programme, which has achieved positive results in health and economic terms, and has served as a methodological basis for a number of poverty reduction programmes all over the world.

Mexico is currently moving beyond governmental intersectoral action, seeking to involve all stakeholders in addressing specific health issues. A recent example of this new generation

of intersectoral programmes is the National Agreement on Healthy Food, which in addition to combining the efforts of the Ministry of Health and the Ministry of Education, has succeeded in enlisting another interest group, namely the food industry. Without the inclusion of the food industry, it would not have been possible to sign the Code on self-regulation for the advertising of food and non-alcoholic beverages for consumption by children; this instrument currently enjoys an approximate compliance rate of 90% on the part of signatory companies- and, in addition, more than 70% of the signatory companies promote healthy lifestyles in advertising (93).

Despite the considerable progress that has been made, there is practically no follow-up information about the benefits of intersectoral interventions, and specifically the expression of impacts in economic terms. Thus, although more specific information is needed on the impact of interventions on other determinants and on the different approaches to the determinants depending on the sector concerned, this clearly presents an opportunity to inform public policy-makers using scientific evidence. The Mexican Ministry of Health could, therefore, commit itself to strengthening the evaluation and planning of the intersectoral interventions that it implements.

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Appendix

Appendix 1. Keywords

Subject	Description	Keywords	
		Spanish	English
Intervention/ programme	<i>Intersectoral action to reduce health inequality by improving the social determinants of health</i>	Programa de desarrollo humano oportunidades, Oportunidades, PROGRESA	'Opportunities'/ Human Development programme
		Programa de comunidades saludables,	Healthy Communities Programme
		Programa de acción de seguridad vial	Road Safety Action Programme
		Acuerdo Nacional para la Salud Alimentaria	National Agreement for Healthy Food
Benefit in economic terms	<i>Economic impact of intersectoral action</i>	Ganancia económica, beneficio económico, rendimiento económico, efecto económico, impacto económico, evaluación económica, productividad, capacidad del recurso humano, fuerza laboral, inversión, ahorro, costo, costeo, ausentismo, pérdida de productividad	Economic gain, profit, economic performance, economic effect, economic impact, economic evaluation, productivity, human resource capacity, labor, investment, savings, cost, absenteeism, lost productivity
Benefit in terms of health	<i>Health impact of intersectoral action</i>	Morbilidad, mortalidad, esperanza de vida, calidad de vida, enfermedad, carga de la enfermedad, nutrición, alimentación, talla	Morbidity, mortality, life expectancy, quality of life, illness, disease burden, nutrition, food, size
Other benefits	<i>Other benefits of intersectoral action</i>	Beneficio, beneficio educativo, mejora en la educación, beneficio en alimentación, evaluación	Profit, educational benefit, improved education, nutrition benefit, evaluation

Appendix 2. Template document for the review of literature on the economic benefits of actions that improve the social determinants of health (SDH)

Title:

Authors:

Objective:

Year of publication:

City/establishment:

Level (national or local):

Provider type (government, private, combination):

Population type (inclusion/exclusion criteria):

Number of individuals who benefit:

Comparison group:

Method to measure the effect of SDH:

Description of intervention:

Principal results

Intervention	Objective	Relevant social determinant(s) of health	Intersectoral	Sectors involved	Result

Assumptions:

Constraints:

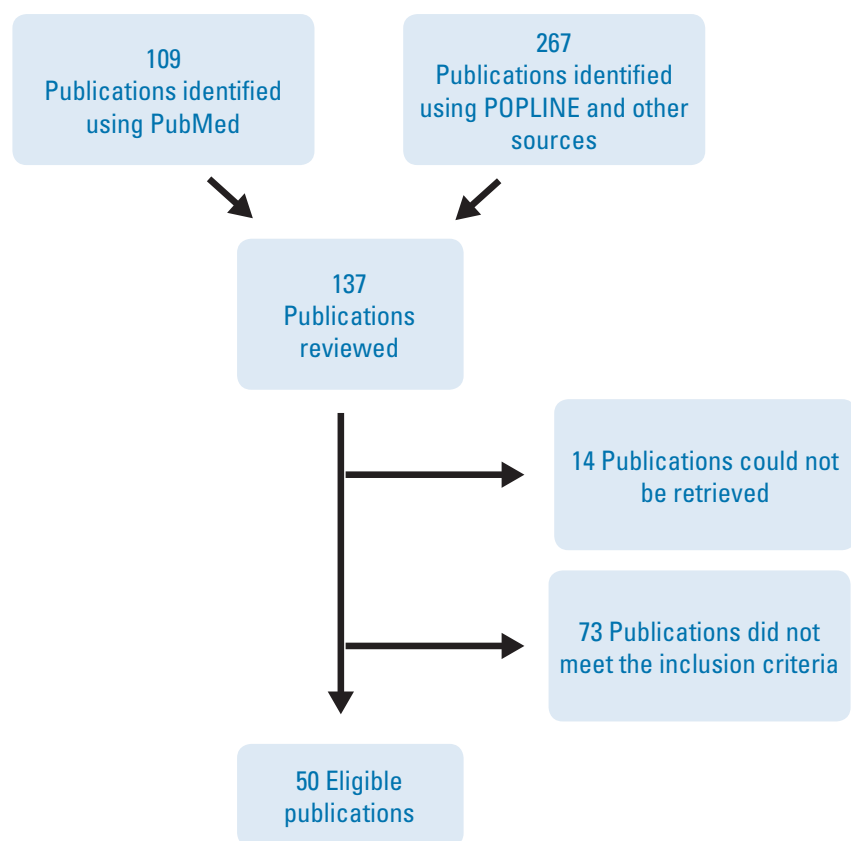
Potentially useful references from article

(cited references that could contain additional information):

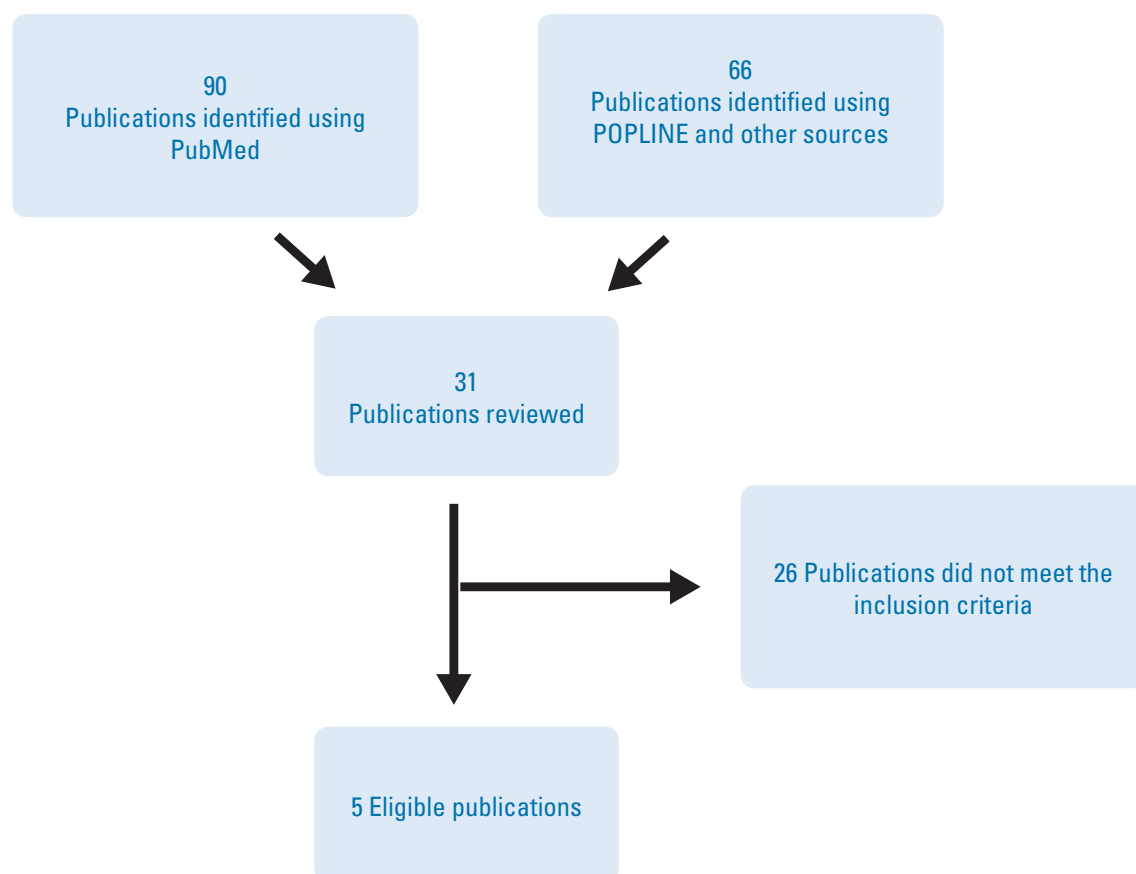
Study funding:

Comments:

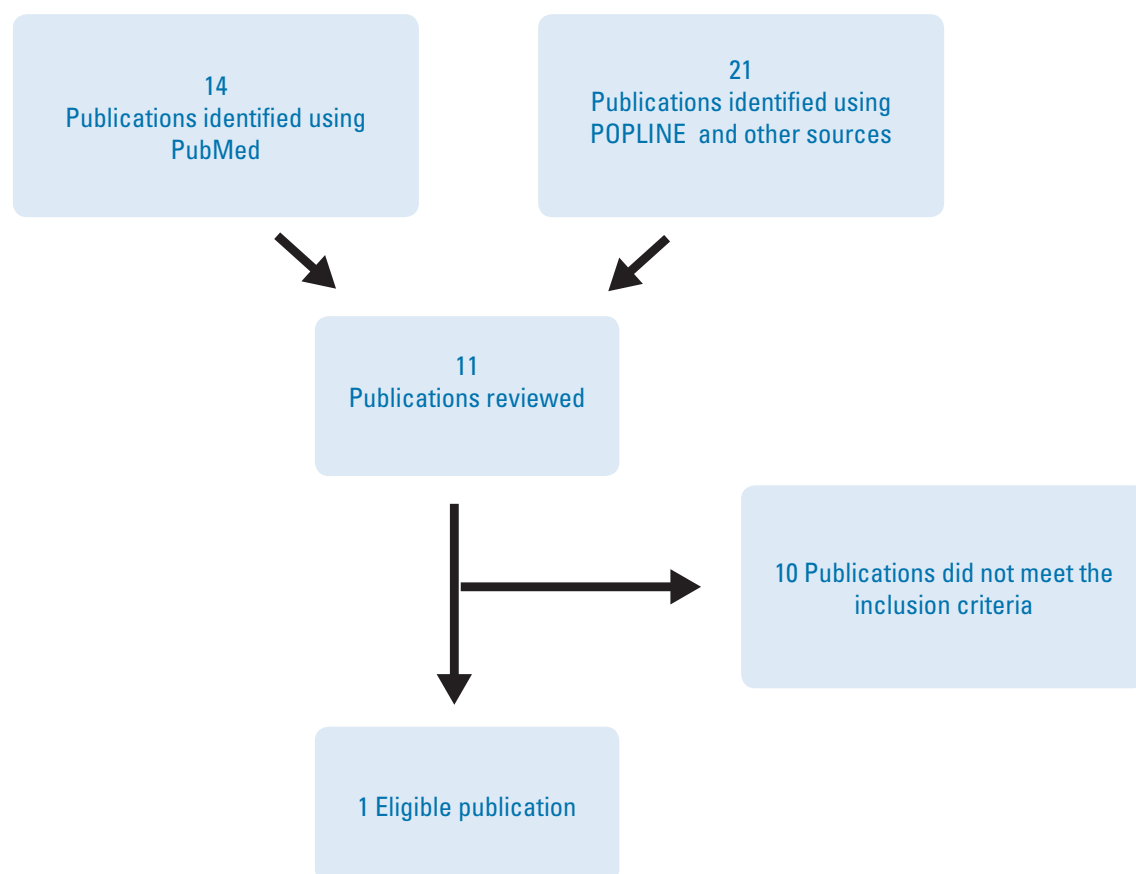
Appendix 3. Flowchart showing the review of literature on the Opportunities programme



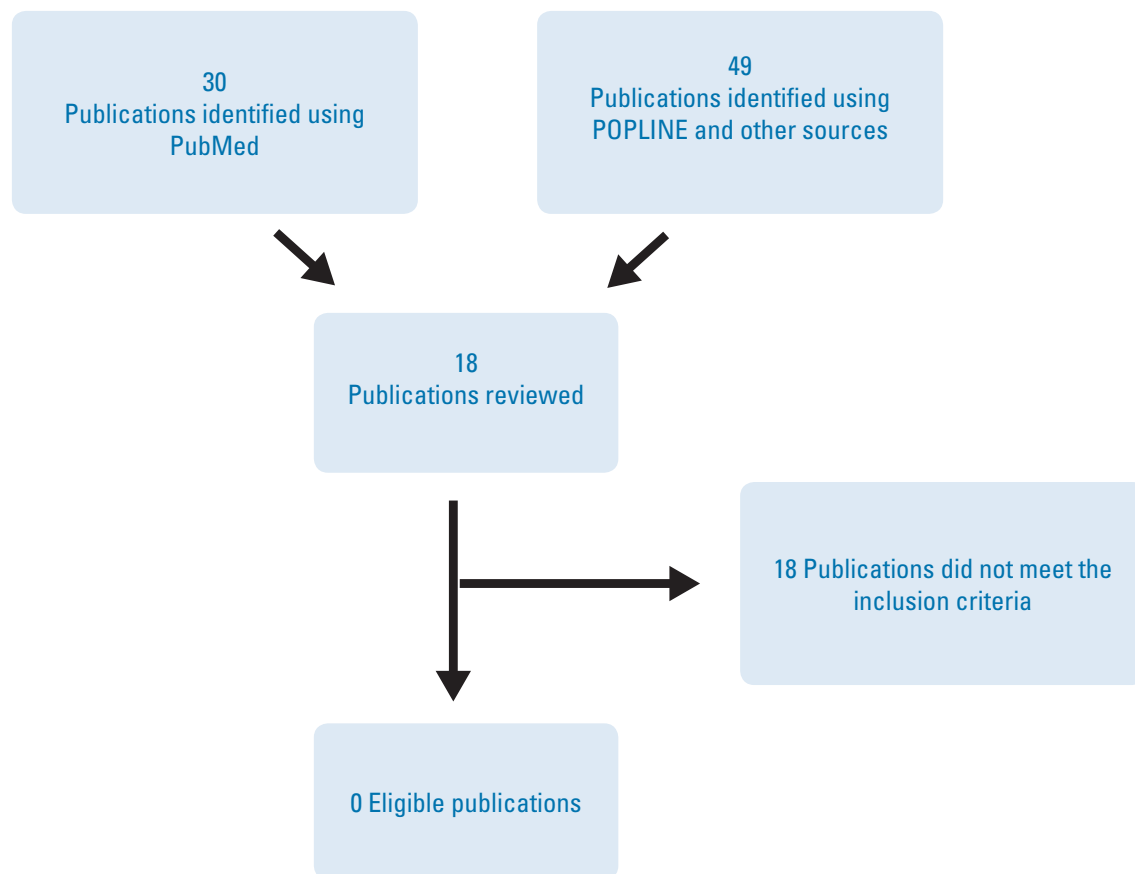
Appendix 4. Flowchart showing the review of literature on the Healthy Communities Programme



Appendix 5. Flowchart showing the review of literature on the Road Safety Action Programme



Appendix 6. Flowchart showing the review of literature on the National Agreement on Healthy Food



Notes

Notes

SOCIAL DETERMINANTS OF HEALTH

ACCESS TO POWER, MONEY AND RESOURCES AND THE CONDITIONS OF DAILY LIFE —
THE CIRCUMSTANCES IN WHICH PEOPLE ARE BORN, GROW, LIVE, WORK, AND AGE



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