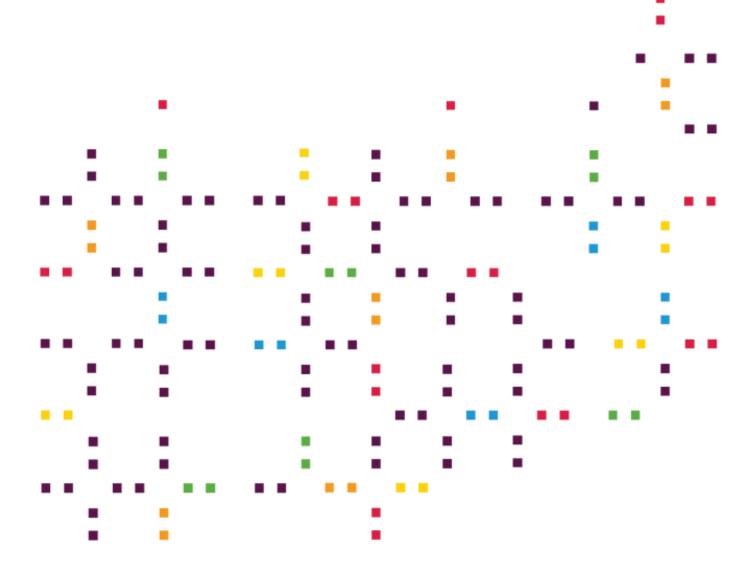
The Social Benefits of Engagement with Culture and Sport

APPENDICES TO THINK PIECE

March 2015











The Culture and Sport Evidence (CASE) programme is a joint programme of strategic research led by the Department for Culture, Media and Sport (DCMS) in collaboration with the Arts Council England (ACE), English Heritage (EH) and Sport England (SE).

The Sport Industry Research Centre and Centre for Regional Economic and Social Research (Sheffield Hallam University) and Business of Culture (BOC) were commissioned to produce this report. The views expressed do not necessarily represent those of CASE.





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Appendix 1: Literature Review Methodology

A review of literature is an important part of any research project to understand existing knowledge in this field and to provide evidence for informing policy and practice (Tranfield, Denyer, & Smart, 2003). Within the social sciences, traditional literature reviews have taken the form of narrative reviews. However, these have been criticised for being descriptive and lacking thoroughness and systematic investigation, leading to suggestions that the selection of papers included or excluded may reflect the biases of the reviewer who collects and interprets the studies (Torgerson, 2003).

Systematic reviews have emerged as an alternative approach to literature reviewing. It was first developed in the medical sciences to 'improve the quality of the review process by synthesising research in a systematic, transparent and reproducible manner' (Transfield et al., 2003: 209) but has since been adopted as a common approach to literature reviewing in many areas of social science. A systematic review of literature is based on an explicit, rigorous and transparent methodology (Greenhalgh, Robert, Macfarlane, Bate, & Kyriakidou, 2004). It minimises bias through auditing the reviewers' decisions, procedures and conclusions. Theoretically anyone adopting the same review process will be able to repeat a systematic review and obtain the same results, thus allowing systematic reviews to be updated, if different timescales are adopted. This is made possible by establishing pre-determined criteria and auditing the decisions taken, which allows the process to be transparent. A disadvantage of the method is that, if employed rigorously in a scientific manner, it does not allow the inclusion of studies known to the researcher, which may be relevant to the research topic, but that fall outside the predetermined criteria. Similarly, it does not allow for the inclusion of secondary or related literature, which may be found during the process of the systematic review, but which falls outside the criteria. Systematic reviews are often associated with meta-analysis, which is a statistical procedure for synthesising findings in order to obtain overall reliability unavailable from any single source alone. (Tranfield et al., 2003: 209).

For the purposes of this think piece, systematic review principles were employed to review the literature. In essence, the procedures for systematic review were followed. The search strategy and terms were pre-defined and a transparent record of the review process has been documented. All studies were identified and categorised in terms of the quality or hierarchy of evidence. However, studies known to the authors and the Arms Length Bodies (ALBs) commissioning the research that met all the pre-determined criteria, but for whatever reason were not identified by the systematic search, were also included. Nevertheless, these sources were categorised and identified separately to ensure that any repeated literature search on the social benefits of culture and sport in the future would uncover the same results. A possible explanation for these sources being omitted from the search strategy is discussed in A1.4. For the purpose of reporting, the results of the systematic review have been collated into summary tables within each section (e.g. health, crime etc.), and from this a narrative interpretation of the evidence has been developed. No meta-analysis of the findings has been undertaken.

Within a systematic review there are several agreed stages (Tranfield, 2003). These are:

- Planning the review
- Conducting a review
- Reporting and dissemination

Table A1.1 summarises the three review stages of this project.

Table A1.1: Summary of systematic review stages and project outline

Stage	Tranfield et al. (2003)	Steps	Detail
Stage 1: Planning the review	 0 - identification of the need for a review 1 - preparation of a proposal for review 2- development of a review protocol 	Form a review panel Map the field of study Carry out scoping studies to form review protocol and aim of the systematic review Identify initial key words and possible combinations of search strings in each area Agree databases/sources to search Agree key search terms for sport and culture Define criteria for including studies	 A review panel was formed: Peter Taylor, Larissa Davies, Jayne Wilson (SIRC); Peter Wells, Jan Gilbertson (CRESR); William Tayleur (BOC); Dan Plumley (PhD student), Jo Dobson (SHU sport/culture information specialist) Liaise with DCMS regarding scope of study; inclusion/exclusion criteria; definitions of key terms Agree four sectors (Sport; Arts; Heritage; MLA) Sources: CASE; Update all CASE sources March-Dec 2012; National Benefits Hub; Known additional sources not covered by CASE 1996 - Dec 2012 (All sources listed in Appendix 2) Criteria: Timeframe (1996-2012); Academic relevance (peer review; ALB reports); Language (English); Length three pages or more; Searches on title/keyword/abstract. Finalise key terms (Appendix 3)
Stage 2 Conducting a review	3 - identification of research	Group keywords into search strings	 Appendix 4: Search strategy results-sport Appendix 5: Search strategy results-culture
	4 - selection of studies5 - study quality categorisation	Create a table and record number of documents retrieved from search strings Import into database	

	6 - data extraction and monitoring	Extract duplicates within each database and across databases	
	7. data synthesis	Apply inclusion/exclusion criteria - screen for relevance	
		Create a table that records the inclusion or exclusion decision for each document	
		Provide a historical record for the decisions made during the review process	
		Record the number of hits/studies taken forward	
		Read, categorise and evaluate the studies	
Stage 3 Reporting and disseminating	8 - The report and recommendations	Task 1: Thematically present the findings of the literature review according to key social impacts, incorporating conceptual frameworks	Think piece report: Literature review and conceptual framework

A1.1 Planning the review

The initial stage in the review planning was to form a review panel and hold meetings to discuss the reviewing process and decisions relating to the inclusion and exclusion of literature.

The review panel comprised the following members. It included key members of the research team together with two experts in systematic review methodology.

Professor Peter Taylor (SIRC)

Dr Larissa Davies (SIRC)

Jayne Wilson (SIRC)

William Tayleur (BOC)

Professor Peter Wells (CRESR)

Jan Gilberson (CRESR)

Dan Plumbley (PhD Student)

Jo Dobson (SHU sport/culture information specialist)

An initial scoping study was conducted at this stage to establish a brief overview of the related topics in the field, including theoretical, practical and methodological history and key discussions (Tranfield *et al.*, 2003). A review protocol was conducted to describe each step, to limit bias and ensure an efficient process. The timeframe for the study was January 1996 -December 2012.

The primary source used for the systematic review was the Culture and Sport Evidence (CASE) database (DCMS, 2013). This source includes references from 1996 and was last updated in March 2012. In addition, the sources used to derive the CASE database (see Bird *et al.*, 2011; Tripney *et al.*, 2012) were searched between April - December 2012 for relevant literature. Finally, any sources known to the research team but not included in CASE were searched from 1996 - 2012. A major omission in the CASE database known to the authors is the National Benefits Hub (Databank), formally the Benefits Catalogue (Canada). This was searched from January 1996 - December 2012. A summary of all the sources used within the literature review are listed in Appendix 2.

The key terms were agreed by the review panel and approved by the DCMS steering group¹. The criteria agreed for inclusion and exclusion of literature were as follows:

- Academic relevance
- English language
- The publication date was post 1995
- The publication length was required to be more than three pages. (on the basis that short articles are less likely to provide an evidence supported literature)
- Peer review and ALB research reports

¹ The DCMS steering group comprised of representatives from DCMS, Sport England, MLA, English Heritage and The Arts Council, acted as an advisory group for the project.

Search strings

The search strings for the project were agreed by the review group and are listed in Appendix 3. These were utilised for the CASE database and the CASE update.

The National Benefits Hub (NBH) search function was limited and only allowed for searching under broad headings (e.g. social impact, crime, health etc.). It also searched whole documents rather than just the abstract and title, therefore the number of hits returned was unmanageable and repetitious. A decision was taken by the review panel to limit the search of the NBH to the following generic terms:

- Social impact
- Non-market cost
- Non-market benefit
- Health benefit

From these generic terms the literature was sorted into sport and culture, and then further into the sub-categories previously agreed by the review panel.

A1.2 Conducting a review

Search Strategy

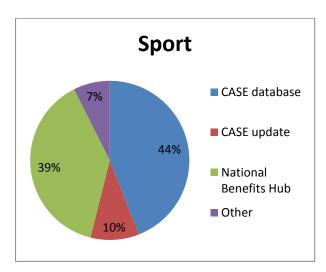
The search strategy adopted for each source is detailed below:

- · Number of hits for each search string is recorded
- Screened for relevance based on criteria using title/language
- Screened for relevance based on criteria using abstract/length
- Relevant sources retrieved for detailed evaluation of full text
- · Studies selected for inclusion in systematic review

All searches were conducted manually by the research team in SIRC and BOC.

Table A1.2 summarises the number of papers from each source carried forward for review for sport and culture. The number of papers included and excluded at each stage of this process (for each source) is documented in detail in Appendix 4 (sport) and Appendix 5 (culture). Figure A1.1 and Figure A1.2 below summarise the origin and number of sources used for this review. 54% of sources in the sport section are from the CASE database but 88% of the sources for culture.

Figure A1.1: Origin of literature sources: Sport and culture



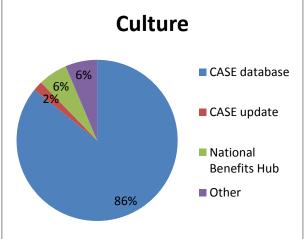


Table A2.2 summarises the number of papers from each source carried forward for review for sport and culture. The number of papers included and excluded at each stage of this process (for each source) is documented in detail in Appendix 4 (sport) and Appendix 5 (culture).

Figure A1.2: Number of sources reviewed: Sport and culture

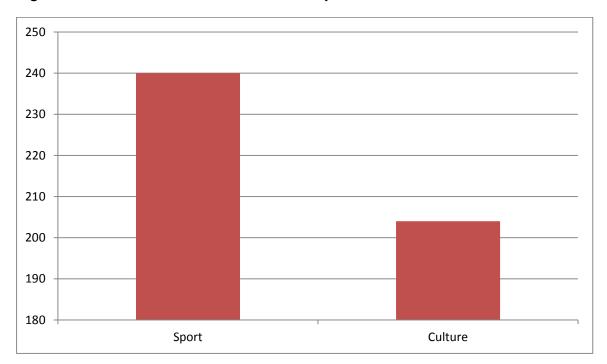


Table A1.2: Systematic search summary tables

Sport

Source	Number of hits	Intra- category duplicates removed	Screen for relevance on title/language	Screen for relevance on abstract/length	Inter- database duplicates removed	Total for review	Additional Ref removed/not included in literature tables)	Total used in Systematic Review
CASE	1196	96	329	166	30	136	30	106
CASE update	13827	n/a*	208	42	n/a*	42	18	24
Benefits Hub Other known	1784	n/a*	218	n/a**	n/a*	124	31	93
sources								17
Total	16807	96	755	208	30	302	79	240

^{*}Duplicates were removed at different stage of the process. See Appendix 4 for details of methodology for each source.

**Screened for relevance on full publication as abstract not always available

Culture

Source	Number of hits	Intra- category duplicates removed*	Screen for relevance on title/language	Screen for relevance on abstract/length	Inter- database duplicates removed	Total for review	Additional Ref removed/not included in literature tables)	Total used in Systematic Review
CASE	1099		718	254	7	247	72	175
CASE update	7936		265	80	40	40	36	4
Benefits Hub Other known	844		96	n/a		90	78	12
sources								13
Total	9879		1079	334	47	377	186	204

^{*} Duplicates were removed at the 'screen for relevance on title/language' stage of the process. See Appendix 5 for details of methodology for each source

Hierarchy of evidence

A key aspect of systematic review within the medical sciences is the hierarchy of evidence. The hierarchy of evidence recognises that evidence varies in quality and attempts to grade evidence according to its reliability and effectiveness. There are various forms of the hierarchy of evidence that have evolved from Guyatt *et al.* (1995) and Sackett (1996), although there is broad agreement that certain types of study (e.g. Randomised Controlled Trials (RCT)) rank above others (e.g. cross-sectional studies), as illustrated in Fig A1.3. Generally, the higher up the pyramid a methodology is ranked, the more robust it is assumed to be. However, the hierarchy is not absolute and a well conducted extensive cross-sectional study may provide more convincing evidence that a poor RCT.

Sys ReviewsMetanalysis

RCT's

Cohort studies

Case-Control

Cross-sectional studies

Case series, Case reports

Ideas, opinions, editorials, anecdotal

Figure A1.3: The hierarchy of evidence

(Source: Aslam et al., 2012)

While the application of the hierarchy is an integral part of medical sciences, its application to social science is more problematic. The quality of information accepted as evidence depends on the value system adopted by researchers and commissioning bodies (Tranfield *et al.*, 2003). Essentially the hierarchy of evidence favours the positivist tradition of research, and reflects the scientific roots from which it is developed. It is also best suited to quantitative evidence. In areas of social science such as management, education and social policy, there is less of a consensus on what constitutes better or high quality evidence; RCTs are rare and qualitative data is often used to establish why individuals behave in a certain way. Furthermore, full data in social science research is not always made available in articles by authors, making the application of the hierarchy of evidence difficult.

Within this literature review, given the scientific nature of the evidence base, the application of the hierarchy lends itself most suitably to the area of health. Nevertheless, the authors have attempted to use it as a framework for evaluating the weight of evidence for the social benefit of sport and culture across all sub-sectors. For the purposes of the review, evidence has been graded as follows:

Table A1.3: Classification of studies for Sport and Culture

Rank	Methodology	Example/description
A	Systematic reviews/meta-analyses	Reviews of data that use transparent and rigorous methodology. Meta-analysis includes statistical analysis of results.
В	Randomised Controlled Trials (RCTs)	Clinical trials with clear methodology. They use randomised participants and use control groups.
С	Cohort study	A form of longitudinal study. Follows a group of people with a common or defined characteristic. Can be prospective or retrospective.
D	Time-series study	A form of longitudinal study (not panel). Revisits a cross-sectional study or similar after a period of time has elapsed and compares the data.
E	Case-control	Studies that do not use randomised participants but compare two existing groups (one is a control group).
F	Cross-sectional study	Provide data on entire populations based on a sample. Collect data at a defined time.
G	Case study/programme evaluations	Intensive analysis of an individual or group, or intervention. No case control. Descriptive or explanatory.
Н	Economic evaluations	Employ economic analysis methods to quantify the economic value of an intervention or activity
I	Narrative reviews	Review of literature that does not follow a clearly defined methodology.
J	Policy brief Expert opinion/ Scientific statement	Including opinions from well-respected authorities, descriptive statistics, guidelines based on evidence

A1.3 Reporting and dissemination

Tranfield et al. (2003: 218) suggest that:

'...a good systematic review should make it easier for the practitioner to understand the research by synthesizing extensive primary research papers from which it was derived'.

The results of the systematic literature review within this report are presented separately for sport and culture. Within each of these sections, the findings are produced thematically in six categories of social impact: health; wellbeing; crime; social capital; education and multiple social impacts. The literature is presented in two ways. Firstly, for each category of social impact, a descriptive analysis of each source identified for review is presented in a summary table and categorised in terms of the hierarchy of evidence. Secondly, a narrative summary of this literature is presented. The category 'multiple social impacts' summarises the extent to which there is consensus and integration across the various themes of social impact. Unlike traditional systematic reviews in the medical sciences, which focus heavily on the evidence at the top of the hierarchy, the narrative summary of the evidence presented in this report also assesses the weight of evidence (e.g. Appendix 6) in relation to the six categories of social benefit.

A1.4 Strengths and limitations of the systematic review and search strategy

The systematic review presented within this report is, as far as we are aware, the first attempt to apply a rigorous, transparent and auditable search strategy across the wide body of literature on the social impact of sport and culture. However, there are invariably limitations with this review. These are detailed in Table A1.4.

Table A1.4: Limitations of the systematic review: Key issues

CASE Database coverage:	This CASE database was the agreed primary source for the systematic review. However, there were several weaknesses with this source:
	1. The search strings used to construct the CASE database include broad terms such as 'impact' and 'benefit' but not specific social impact terms relevant to this project. Potentially the literature in the CASE database therefore only represents a partial selection of social impact literature.
	2. The CASE database was last updated in March 2012. This required the original sources of CASE (83) to be searched manually between April-December 2012 (CASE update).
	3. The CASE update search used different search strings to those originally used to construct the CASE database. The CASE update search is potentially drawing upon a much greater selection of literature related to social benefit than the CASE database search.
	4. There is key critical literature on social benefit of sport and culture missing from the database (e.g. Oughton and Tacon, 2007).
	5. The CASE database excludes the National Benefits Hub (NBH). This is a key source of research for sport. Nearly 40% of the sources used for the sport review are drawn from the NBH.
	6. The CASE database excludes the Cochrane collection (database of systematic reviews and meta-analyses in medicine and health specialities). The omission of the source may under represent quality literature and evidence on health, sport and culture.
Search strategy	The scope of the project did not allow for the search terms to include individual activities (e.g. football; swimming, ballet, dance). While the generic terms of sport, culture, arts etc. will have identified some literature related to specific activities, it cannot be assumed that this is comprehensive and there may be further literature available, which is not included in the review.

In addition, while not a limitation of the review, several technical issues with the CASE database were identified through this project, which presented challenges to the search strategy. Some of

these were resolved but others remain outstanding and could present problems if the literature review is repeated in the future:

- Truncation does not work, therefore the search strategy required search strings to be multiplied to cover all variants of the word (e.g. participat*)
- Searches could not be saved, and were deleted from the search history after 30 minutes of inactivity (EPPI resolved this in January 2013 but some problems remain)
- It is not possible to export search results to word processing package or similar (EPPI resolved this in January 2013 but some problems remain)
- Similarly, it is not possible to link search results to a database for cataloguing records (e.g. REF works)
- It is not possible to access full copies of the papers/reports from the database (only title and abstract).

Finally, while the process of systematic review is transparent, auditable and designed to be 'objective', the process still requires judgement to be applied in the decision making process, for example in terms of data extraction (selecting literature based on title and abstract), and data synthesis (interpretation of the literature). The findings presented within this report therefore represent the views and judgements of the authors.

Appendix 2: Systematic review sources and databases

CASE Database (1996-March 2012):

The CASE database is a unique and comprehensive resource for those working in culture and sport. It currently holds over 12,000 studies from across the CASE sectors (sport, arts, heritage, museums, galleries, libraries and archives), undertaken internationally and within the UK. The database was last updated in April 2012 and includes items published up to 31 March 2012.

http://www.culture.gov.uk/what we do/research and statistics/7288.aspx

CASE Update search sources (April 2012-Dec 2012)

Bird et al (2011) and Tripney et al (2012) detail how the CASE database was developed. The following sources, which formed the basis of the CASE database, were searched between April and December 2012:

Bibliographic databases:

Applied Social Sciences Index and Abstracts (ASSIA) (CSA)

Arts and Humanities Citation Index (AHCI) (WoK) - did not have access via SHU

British Humanities Index (BHI) (CSA) - none were relevant

Econlit (EBSCO)

Education Resources Information Centre (ERIC) (CSA)

International Bibliography of the Social Sciences (IBSS) (CSA) - did not have access via SHU

Medline (WoK) - in Econlit

PsycINFO (EBSCO)

Social Science Citation Index (SSCI) (WoK)

Social Services Abstracts (CSA)

Sociological Abstracts (CSA)

Specialist bibliographic databases:

Impact Database (available through CCPR at the University of Glasgow)

Physical Education Index (CSA)

SportDISCUS (EBSCO) - in Econlit

Specialist Journals

Cultural Trends

Engage Journal

Visual Culture in Britain

Websites of national and regional stakeholder organisations

Arts Council England

Audit Commission

Big Lottery Fund

Cabinet Office

Central Council for Physical Education

Commission for Architecture and the Built Environment (CABE) - extinct as of 1 January 2011

Communities and Local Government (CLG)

Craft Council

Creative and Cultural Skills

DEMOS

Department for Culture, Media and Sport

Department of Health

English Federation of Disability Sport (EFDS)

English Heritage

Fitness Industry Association

Her Majesty's Treasury (HMT)

Heritage Lottery Fund (HLF)

Leisure Studies Association

Local Government Association

National Audit Office

National Foundation for Education Research

Ofsted

SkillsActive

Sport England (including the Value of Sport Monitor)

Sporting Equals

Sports Coach UK

UK Sport

Women's Sport and Fitness Foundation - website doesn't work

Youth Sports Trust

Websites of UK research centres / departments / organisations

CultureMap London

Economic and Social Research Council Centre for Research on Socio-Cultural Change (CRESC)

Loughborough University: Institute of Sport and Leisure Policy

Scottish Government: Culture, External Affairs and Tourism Research Network

Sheffield Hallam University: Sport Industry Research Centre

University of Chester: Chester Centre for Research into Sport and Society

University of Glasgow: Centre for Cultural Policy Research

University of Leicester: Research Centre for Museums and Galleries

University of Warwick: Centre for Cultural Policy Studies

Websites of International research centres / departments / organisations

National Endowment for the Arts

North American Society for the Sociology of Sport - must be a member to access

Social Impact of the Arts (University of Pennsylvania)

Canadian Council for the Arts

Canadian Heritage

Australian Council for the Arts

Australian Sports Commission

Council of Europe: Cultural Policy Research

European Commission: Sport European Cultural Foundation

Research funding bodies

Economic and Social Research Council

Arts and Humanities Research Council

Websites (Impact Database search strategy)

Arts Education Partnership

Arts Management Network

Arts Professional

Arts Council (Ireland)

Americans for the Arts (Arts Watch)

Boekman Foundation

Comedia - research publications are now found under 'Charles Landry' Website

Community Arts Network

Creative City Network (Canada)

Creative Exchange

Creative Partnerships

Culturelink

European Institute for Comparative Cultural Research (ERICarts)

Hill Strategies Research

The International Federation of Arts Councils and Culture Agencies (IFACCA)/ Arts and Culture Online

Readers News Service (ACORNS) -Interarts

Institute for Public Policy Research (IPPR)

Joseph Rowntree Foundation

LabForCulture

Museum & Society

New England Foundation for the Arts

NESTA

New Economics Papers in Cultural Economics

Scottish Government Research Digest

Scottish Museum Council

United Nations Educational, Scientific and Cultural Organization (UNESCO) (Culture)

The Urban Institute

Wallace Foundation

Websites (CASE Board additional recommendations)

Sport Wales

Arts Council of Wales

National Museums and Galleries of Wales

Audience Wales

Creative Scotland

Museums Galleries Scotland

Arts Council of Northern Ireland

Audience Northern Ireland

Museum Council Northern Ireland
National Museum Northern Ireland
Sport Northern Ireland
Department of Culture Arts and Leisure (Northern Ireland)
Northern Ireland Screen

Google Alerts

'social exclusion' arts culture
'social inclusion' arts culture
'social impact' arts culture
cultural tourism impact
economy arts culture research impact
festival impact
health arts culture research
impact major cultural research
impact mega event
regeneration arts culture

Additional sources identified from the authors' expertise (1996-March 2012):

The National Benefits Hub (NBH) - 1996-December 2012

The NBH provides updated evidence on the benefits of recreation, sports, fitness, arts, culture and parks. The first 'Benefits Catalogue' was published in 1992 by Parks and Recreation Federation of Ontario (now Parks and Recreation Ontario) with financial support from the Ontario Ministry of Tourism and Recreation. In 1997, this work was updated by the Canadian Parks/Recreation Association with financial support provided by Health Canada. In 2009 the Catalogue was once again updated with the name changed to Benefits DataBank to reflect its digital format and enhancement with additional types of information. This time it is the result of a partnership between ARPA (Alberta Recreation and Parks Association) and the Canadian Parks and Recreation Association. The Benefits DataBank provides an online, up-to-date source of evidence for recreation.

http://benefitshub.ca/

Additional Sources (17)
Audit Commission (2009)
Bunde-Birouste et al. (2012)
Coalter & Allison (1996)
Coalter (2007)
Cox (2012)
Nichols (2007)
Oughton and Tacon (2007)
Rasciute and Downward (2010)
Rodriguez et al. (2011) 4 references
Schwarzenegger et al. (2005)
Southall et al. (2013)
Sport England (2008a; 2008b; 2008c)

Appendix 3: Search words and strings

Sport (Sport OR exercise)

and participat*/participant/participation/participating or engage/engagement volunteer/volunteering/volunteers or social benefit* and social cost* or social impact* or or social value intangible cost* or intangible benefit* or or externalities non-market cost* or non-market benefit* or health care cost* and value of health change* or or crime or vandalism delinquency or anti-social behaviour or or youth offend* or recidivism diversion or community safety or community cohesion or civil society or citizenship or volunteer* or social capacity or educat* or academic or student or pupil or excellen* or preservation value or option value or existence value or or bequest value social capital or social integration or

social cohesion or social inclusion or social exclusion or regeneration or neighbourhood renewal or public good* or merit good* or wellbeing or well-being or quality of life or environment or noise or litter or pollution or

NOTES

^{*}plural versions

Culture (Arts/Arts OR Heritage OR Galleries OR Museums OR Libraries OR Archives OR Culture)

participat*/participant/participation/participating engage/engagement or volunteer/volunteering/volunteers or social benefit* and social cost* or social impact* or social value or intangible cost* or intangible benefit* or externalities or non-market cost* or non-market benefit* or health care cost* and or value of health change* crime or vandalism or delinquency or anti-social behaviour or youth offend* or recidivism or diversion or community safety or community cohesion or civil society or citizenship or volunteer* or or social capacity educat* or academic or student or or pupil excellen* or preservation value or option value or existence value or bequest value or social capital or social integration or social cohesion or

social inclusion or social exclusion or regeneration or neighbourhood renewal or public good* or merit good* or wellbeing or well-being or quality of life or environment or or noise litter or pollution or

NOTES

*plural versions

Appendix 4: Summary tables for systematic review: Sport

					Inter-		AdditionalRef	
			Screen for	Screen for	database		removed/not	
		Intra-category	relevance on	relevance on	duplicate		included in	
	Number of	duplicates	title/languag	abstract/lengt	s		literature	
	hits	removed	e	h	removed	Total for review	tables)	Total used
CASE	1196	96	329	166	30	136	30	106
CASE update	13827	n/a*	208	42	n/a*	42	18	24
Benefits Hub	1784	n/a*	218	n/a**	n/a*	124	31	93
Other known sources								17
Total	16807	96	755	208	30	302	79	240
 Duplicates were remo 	oved at differ	ent stage of the	process (interdat	tabase). See table l	below.			
**Screened for releva	ance on full	publication as	abstract not all	ways available.				
APPENDIX 4b: Summar	v table for sv	stematic review	: Sport - CASE up	date/BH				
APPENDIX 4b: Summar	y table for sy	stematic review	: Sport - CASE up	date/BH		AdditionalRef		
APPENDIX 4b: Summar	y table for sy					AdditionalRef		
APPENDIX 4b: Summar		Screen for	Database	Screen for	Total for	removed/not		
	Number of	Screen for relevance on	Database duplicates	Screen for relevance on	Total for	removed/not included in	Total used	
Database	Number of hits	Screen for relevance on title	Database duplicates removed	Screen for relevance on abstract	review	removed/not included in literature tables)		
APPENDIX 4b: Summar Database Totals Reportits Hub	Number of hits 13827	Screen for relevance on title	Database duplicates removed	Screen for relevance on abstract	review 42	removed/not included in literature tables)	24	
Database Totals Benefits Hub	Number of hits 13827 1784	Screen for relevance on title 208	Database duplicates removed 21	Screen for relevance on abstract 42 n/a**	review 42 124	removed/not included in literature tables) 18	24	
Database Totals Benefits Hub CASE update - different	Number of hits 13827 1784	Screen for relevance on title 208 218	Database duplicates removed 21 81 duplicates remov	Screen for relevance on abstract 42 n/a**	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	
Database Totals Benefits Hub CASE update - different	Number of hits 13827 1784	Screen for relevance on title 208 218	Database duplicates removed 21 81 duplicates remov	Screen for relevance on abstract 42 n/a**	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	
Database	Number of hits 13827 1784 process to Cance on title to	Screen for relevance on title 208 218 ASE so database the whole article	Database duplicates removed 21 81 duplicates remov	Screen for relevance on abstract 42 n/a**	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	
Database Totals Benefits Hub CASE update - different *After screen for releva	Number of hits 13827 1784 process to Cance on title to	Screen for relevance on title 208 218 ASE so database the whole article	Database duplicates removed 21 81 duplicates remov	Screen for relevance on abstract 42 n/a** ved before screen in refore no screening	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	
Database Totals Benefits Hub CASE update - different *After screen for relevo Summary table for all s	Number of hits 13827 1784 process to Cance on title in sport sources	Screen for relevance on title 208 218 ASE so database the whole article	Database duplicates removed 21 81 duplicates remoi was printed, the	Screen for relevance on abstract 42 n/a** ved before screen in refore no screening	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	
Database Totals Benefits Hub CASE update - different *After screen for relevo Summary table for all s Total used from all s	Number of hits 13827 1784 process to Cance on title in sport sources	Screen for relevance on title 208 218 ASE so database the whole article	Database duplicates removed 21 81 duplicates remoi was printed, the	Screen for relevance on abstract 42 n/a** ved before screen in refore no screening	review 42 124 for relevance	removed/not included in literature tables) 18 31 e on abstracts.	24	

Appendix 4c: CASE systematic review results: Sport

h					Number of hits	Intra-group duplicates removed	Screen for relevance on title/language	Screen for relevance on abstract/length	Inter-group duplicates removed	Total for	Additional ref removed / not included in literature tables	Total use
1		Sport/sports/sportin	ng									
2 or		Exercise										
3 an	d	participant/participar	nts/participation	n/participating								
4 or		engage/engagemen										
5 or		volunteer/volunteerin										
6 (1	or 2) AND (3 or 4or 5) and		social benefi	it/benefits	8	8	3					
7 (1	or 2) AND (3 or 4or 5) and		social cost/c	osts	2	2	1					
8 (1	or 2) AND (3 or 4or 5) and		social impac	t/impacts	12	11	8					
9 (1	or 2) AND (3 or 4or 5) and		social value/	values	3	3	2					
10 (1	or 2) AND (3 or 4or 5) and		intangible co	st/costs	0	0	0					
11 (1	or 2) AND (3 or 4or 5) and		intangible be	enefit/benefits	0	0	0					
12 (1	or 2) AND (3 or 4or 5) and		externalities		2	2	2					
13 (1	or 2) AND (3 or 4or 5) and		non-market	cost/costs	0	0	0					
14 (1	or 2) AND (3 or 4or 5) and		non-market	benefit/benefits	1	1	1					
					28	27	17	13				
15 (1	or 2) AND (3 or 4or 5) and		he	alth care cost/costs	0	0	0					
	or 2) AND (3 or 4or 5) and			ue of health change/changes	0		0					
	or 2) AND (3 or 4or 5) and			alth benefit/benefits	35		11					
	, , , ,				35	35	11	9				
	0\ AND (2 4 5)					_						
	or 2) AND (3 or 4or 5) and			me	8		6					
	or 2) AND (3 or 4or 5) and			ndalism	0		0					
	or 2) AND (3 or 4or 5) and			linquency	16		15					
	or 2) AND (3 or 4or 5) and			ti-social behaviour/behavior	12		8					
_	or 2) AND (3 or 4or 5) and			uth offender/offending	1		0					
22 (1	or 2) AND (3 or 4or 5) and		rec	cidivism	0 37	0 31	0 29	26				
23 (1	or 2) AND (3 or 4or 5) and		div	ersion	0							
24 (1	or 2) AND (3 or 4or 5) and		COI	mmunity safety	2							
	or 2) AND (3 or 4or 5) and			mmunity cohesion	3		2					
26 (1	or 2) AND (3 or 4or 5) and		Civ	il society	1		1					
27 (1	or 2) AND (3 or 4or 5) and		citi	zenship	8		5					
					14	14	10	5				
	or 2) AND (3 or 4or 5) and			cial capacity	0	0	0					

APPENDIX 4c (cont): CASE systematic review results: Sport

								Additional ref		
			Intra-group	Screen for relevance on	Screen for	Inter-group		removed / not		
earch					relevance on	duplicates		included in		
rm		Number of hits duplic		title/language	abstract/length	removed	review	literature tables	Total use	
29 (1 or 2) AND (3 or 4or 5) and	education/educate/educational	502	500	111						
30 (1 or 2) AND (3 or 4or 5) and	academic/academics	148	104	37						
		650	604	148	73					
31 (1 or 2) AND (3 or 4or 5) and	excellence/excellent	24	24	2	0					
32 (1 or 2) AND (3 or 4or 5) and	preservation value/values	0	0							
33 (1 or 2) AND (3 or 4or 5) and	option value/values	0	0							
34 (1 or 2) AND (3 or 4or 5) and	existence value/values	0	0							
35 (1 or 2) AND (3 or 4or 5) and	bequest value/values	0	0							
05 (1012)/110 (0014010) 4114	Soquest raidor and S	24	24	2	0					
36 (1 or 2) AND (3 or 4or 5) and	social capital	26	26	16						
37 (1 or 2) AND (3 or 4or 5) and	social integration	7	6	2						
38 (1 or 2) AND (3 or 4or 5) and	social cohesion	13	11	3						
39 (1 or 2) AND (3 or 4or 5) and	social inclusion	17	13	8						
40 (1 or 2) AND (3 or 4or 5) and	social exclusion	8	7	5						
		71	63	34	21					
41 (1 or 2) AND (3 or 4or 5) and	regeneration	6	6	1						
42 (1 or 2) AND (3 or 4or 5) and	neighbourhood renewal	0	0	0						
		6	6	1	0					
43 (1 or 2) AND (3 or 4or 5) and	public good/goods	0	0	0						
44 (1 or 2) AND (3 or 4or 5) and	merit good/goods	1	1	1						
11 (1 0 2) 11 2 (0 0 1 10 0) 0 10	mont good good	1	1	1	0					
45 (1 or 2) AND (3 or 4or 5) and	wellbeing	11	1	0						
46 (1 or 2) AND (3 or 4or 5) and	well-being	95	94	39						
47 (1 or 2) AND (3 or 4or 5) and	quality of life	62	50	15						
48 (1 or 2) AND (3 or 4or 5) and	happy/happiness	13	8	1						
		181	153	55	13					
49 (1 or 2) AND (3 or 4or 5) and	environment	146	141	21						
50 (1 or 2) AND (3 or 4or 5) and	noise	1	0	0						
51 (1 or 2) AND (3 or 4or 5) and	litter	0	0	0						
52 (1 or 2) AND (3 or 4or 5) and	pollution	2	1	0						
52 (1 01 2) AND (5 01 401 5) and	politicon	149	142	21	6					
DTAL		1196	1100	329	166	30	136	30	1	
OTES										
lways include plural										
Il combine searches to include search terms 1-5										

APPENDIX 4d: CASE update systematic review results: Sport

APPENDIX 40. CASE update systematic rev	<u> </u>				AdditionalRef removed/not	
		Screen for relevance on	Database duplicates	Screen for relevance on	included in literature	
Database	Number of hits	title	removed	abstract	tables)	Total used
Econlit	9628	36	6	13	5	8
Education Resources Information Centre	222	4	0	3	1	2
Physical Education Index	1624	128	3	13	9	4
PsycINFO	1450	12	1	6	3	3
Social Science Citation	49	10	3	0		
Social services Abstracts	76	3	5	0		
Sociological Abstracts	386	6	1	0		0
Applied Social Sciences Index	392	8	2	6		6
Websites		1		1		1
Totals	13827	208	21	42	18	24

APPENDIX 4e: National Benefits Hub results: Sport

		Screen for	database		Missing		Additional Ref removed (not	
Search Term	No of hits	relevance on title/language	duplicates	Original Classification	references (couldn't access)	Total for review	included in literature tables)	Total used
Social impact	528	116		52	5	21	6	15
Non-market cost	160	28		18	2			
Non-market benefit	412	27		10	1			
Health benefit	684	47		43	3	85	23	62
Anti-social behaviour				2				
Happiness				4	3			
Social capital						2		2
Education				4		5		5
Crime				5		9	2	. 7
Wellbeing						1		1
Conclusion						1		1
Totals	1784	218	80	138	14	124	31	93

Appendix 5: Summary tables for systematic review: Culture

APPENDIX 5a: Summary tables for systematic review: Combined Arts/MLA/Heritage

	Number of hits	Intra-category duplicates removed*	Screen for relevance on title/language	Screen for relevance on abstract/length	Inter-database duplicates removed	Total for review	removed/not included in literature tables)	Total used
CASE	109	9	, , ,	'18	54	7 24	, 7 72	175
CASE update	793	6	2	165	30	40 4	0 36	4
Benefits Hub	84	4		96 n,	/a	9	0 78	12
Other known sources**								13
	987	9	0 10	79 3	34	47 37	7 188	204

^{*}Duplicates were removed at the screen for relevance on title/language stage of the process.

APPENDIX 5b: Summary table for systematic review: Combined Arts/MLA/Heritage - CASE update/BH

							Additional ref		
		Screen for	Database	Screen fo	or		removed/not		
		relevance on	duplicates	relevanc	e on		included in		
Database	Number of hits	title/abstract	removed	abstract		Total for review	literature tables	Total used	
Totals		7936	150	20	28		40 3	6	4
Benefits Hub		844	96	50	n/a	g	90 7	8	12

CASE update - different process to CASE so database duplicates removed before screen for relevance on abstracts

^{**} Includes reports submitted by partners; further searches on Google Scholar, Wolfram Alpha and Microsoft Academic beta

^{*}After screen for relevance on title the whole article was printed, therefore no screening for relevance on abstract.

<u>APPEND</u>	OIX 5c: CASE systematic review	results: MLA		1	2	3	4	5	6
						Screen for		Inter-group	
Search				Number of	Intra-group	relevance on	Screen for relevance	duplicates	Total for
term				hits	duplicates removed	title/language	on abstract/length	removed	review
1		Museums Libraries	Archives & Galleries						
2	or								
3	and	participant/particip	oants/participation/particip	pating					
4	or	engage/engageme	nt/engaging						
5	or	volunteer/volunte	ering/volunteers						
Total									
6	(1 or 2) AND (3 or 4or 5) and	social be	nefit/benefits	1	L	1			
7	(1 or 2) AND (3 or 4or 5) and	social co	st/costs	C					
8	(1 or 2) AND (3 or 4or 5) and	social im	pact/impacts	6	5	6	5		
9	(1 or 2) AND (3 or 4or 5) and	social va	lue/values	2	2	2			
10	(1 or 2) AND (3 or 4or 5) and	intangib	le cost/costs	C					
11	(1 or 2) AND (3 or 4or 5) and	intangib	le benefit/benefits	C					
12	(1 or 2) AND (3 or 4or 5) and	external	ities	C					
13	(1 or 2) AND (3 or 4or 5) and	non-mar	ket cost/costs	C					
14	(1 or 2) AND (3 or 4or 5) and	non-mar	ket benefit/benefits	C					
				9)	9	9		0 !
15	(1 or 2) AND (3 or 4or 5) and		health care cost/costs	C					
16	(1 or 2) AND (3 or 4or 5) and		value of health change/o	cl C					
16a	(1 or 2) AND (3 or 4or 5) and		health benefit/benefits	C		()		
				0)	0	0		0 (
17	(1 or 2) AND (3 or 4or 5) and		crime	1	L				
18	(1 or 2) AND (3 or 4or 5) and		vandalism	C					
19	(1 or 2) AND (3 or 4or 5) and		delinquency	C					
20	(1 or 2) AND (3 or 4or 5) and		anti-social behaviour/be	· C					
21	(1 or 2) AND (3 or 4or 5) and		youth offender/offendir	1 (
22	(1 or 2) AND (3 or 4or 5) and		recidivism	C					
				1		0	0		0
23	(1 or 2) AND (3 or 4or 5) and		diversion	()				
24	(1 or 2) AND (3 or 4 or 5) and		community safety						
25	(1 or 2) AND (3 or 4 or 5) and		community safety	5		5			
26	(1 or 2) AND (3 or 4 or 5) and		civil society	0					
27	(1 or 2) AND (3 or 4 or 5) and		citizenship	5		5			
<i>_</i>	(1 0) 2) AND (3 0) 401 3) and		GGZCHSHIP	10		10			0 8

28	(1 or 2) AND (3 or 4or 5) and	social capacity	0				
29	(1 or 2) AND (3 or 4or 5) and	education/educate/educ	108	93			
30	(1 or 2) AND (3 or 4or 5) and	academic/academics	29	26			
50	(1012)71112 (301 1013) 4114	deadening deadenines	137	119	35	0	35
			137	113			33
31	(1 or 2) AND (3 or 4or 5) and	excellence/excellent	5	2			
32	(1 or 2) AND (3 or 4or 5) and	preservation value/value	0				
33	(1 or 2) AND (3 or 4or 5) and	option value/values	0				
34	(1 or 2) AND (3 or 4or 5) and	existence value/values	0				
35	(1 or 2) AND (3 or 4or 5) and	bequest value/values	0				
			5	2	1	0	1
36	(1 or 2) AND (3 or 4or 5) and	social capital	5	5			
37	(1 or 2) AND (3 or 4or 5) and	social integration	0				
38	(1 or 2) AND (3 or 4or 5) and	social cohesion	3	3			
39	(1 or 2) AND (3 or 4or 5) and	social inclusion	12	6			
40	(1 or 2) AND (3 or 4or 5) and	social exclusion	6	2			
			26	16	11	0	11
41	(1 or 2) AND (3 or 4or 5) and	regeneration	3	3			
42	(1 or 2) AND (3 or 4or 5) and	neighbourhood renewal	1	1			
			4	4	2	0	2
43	(1 or 2) AND (3 or 4or 5) and	public good/goods	0				
44	(1 or 2) AND (3 or 4or 5) and	merit good/goods	0				
			0	0	0	0	0
45	(1 or 2) AND (3 or 4or 5) and	wellbeing	2	2			
46	(1 or 2) AND (3 or 4or 5) and	well-being	6	6			
47	(1 or 2) AND (3 or 4or 5) and	quality of life	4	4			
48	(1 or 2) AND (3 or 4or 5) and	happy/happiness	3	3			
			15	15	7	0	7
49	(1 or 2) AND (3 or 4or 5) and	environment	26	26			
50	(1 or 2) AND (3 or 4or 5) and	noise	0				
51	(1 or 2) AND (3 or 4or 5) and	litter	0				
52	(1 or 2) AND (3 or 4or 5) and	pollution	0				
			26	26	5	0	5
TOTAL			233	201	<i>7</i> 8	0	<i>7</i> 8

NOTES

^{*}always include plural

^{*}all combine searches to include search terms 1-5

APPENDIX 5d: CASE systematic review results: Arts and Culture

Search				N. 1. (1)	Intra-group duplicates	Screen for relevance on	Screen for relevance on	Inter-group duplicates	Total for
erm				Number of hits	removed	title/language	abstract/length	removed	review
		Art/Arts/Culture							
	or								
	and	participant/particip	pants/participation/participating						
	or	engage/engageme							
	or	volunteer/voluntee	ering/volunteers						
otal									
	(1 or 2) AND (3 or 4or 5) an	d	social benefit/benefits	5			5		
	(1 or 2) AND (3 or 4or 5) an		social cost/costs	3			0		
				21		20	-		
	(1 or 2) AND (3 or 4or 5) an (1 or 2) AND (3 or 4or 5) an		social impact/impacts social value/values	3			2		
0	, , , , ,		intangible cost/costs	0			0		
0	(1 or 2) AND (3 or 4or 5) an (1 or 2) AND (3 or 4or 5) an		intangible cost/costs intangible benefit/benefits	0			0		
2	(1 or 2) AND (3 or 4or 5) an		externalities	0			0		
3	(1 or 2) AND (3 or 4or 5) an		non-market cost/costs	0			0		
3 4	(1 or 2) AND (3 or 4or 5) an		non-market cost/costs	0			0		
.4	(1 01 2) AND (3 01 401 5) all	u	non-market benefit/ benefits	29		2		18	0
				29		2		18	U
.5	(1 or 2) AND (3 or 4or 5) an	d	health care cost/costs	0)				
6	(1 or 2) AND (3 or 4or 5) an		value of health change/changes	0					
6a	(1 or 2) AND (3 or 4or 5) an		health benefit/benefits	6		!	5		
				6			5	0	0
7	(1 or 2) AND (3 or 4or 5) an	d	crime	5			5		
8	(1 or 2) AND (3 or 4or 5) an		vandalism	0					
9	(1 or 2) AND (3 or 4or 5) an	d	delinquency	3			3		
0	(1 or 2) AND (3 or 4or 5) an	d	anti-social behaviour/behavior	2			0		
1	(1 or 2) AND (3 or 4or 5) an	d	youth offender/offending	1			1		
2	(1 or 2) AND (3 or 4or 5) an		recidivism	1					
				12		9	9	2	0
2	(1 or 2) AND (3 or 4or 5) an	d	diversion	1			1		
3 4	(1 or 2) AND (3 or 4or 5) an		community safety	1			1		
.4 .5				5			5		
.6	(1 or 2) AND (3 or 4or 5) an		community cohesion	0		-	0		
6 7	(1 or 2) AND (3 or 4or 5) an		civil society	5			4		
./	(1 or 2) AND (3 or 4or 5) an	u	citizenship	12		1:		6	0

28	(1 or 2) AND (3 or 4or 5) and	social capacity	0				
9	(1 or 2) AND (3 or 4or 5) and	education/educate/educational	349	214			
0	(1 or 2) AND (3 or 4or 5) and	academic/academics	69	45			
			418	259	52	0	5.
31	(1 or 2) AND (3 or 4or 5) and	excellence/excellent	14	10			
32	(1 or 2) AND (3 or 4or 5) and	preservation value/values	0				
33	(1 or 2) AND (3 or 4or 5) and	option value/values	0				
34	(1 or 2) AND (3 or 4or 5) and	existence value/values	0				
35	(1 or 2) AND (3 or 4or 5) and	bequest value/values	0				
			14	10	4	0	4
36	(1 or 2) AND (3 or 4or 5) and	social capital	17	17			
37	(1 or 2) AND (3 or 4or 5) and	social integration	0				
38	(1 or 2) AND (3 or 4or 5) and	social cohesion	13	6			
39	(1 or 2) AND (3 or 4or 5) and	social inclusion	23	13			
40	(1 or 2) AND (3 or 4or 5) and	social exclusion	15	6			
			68	42	24	0	24
41	(1 or 2) AND (3 or 4or 5) and	regeneration	18	13			
42	(1 or 2) AND (3 or 4or 5) and	neighbourhood renewal	3	0			
			21	<i>1</i> 3	4	0	4
43	(1 or 2) AND (3 or 4or 5) and	public good/goods	2				
44	(1 or 2) AND (3 or 4or 5) and	merit good/goods	0				
			2	0	0	0	C
45	(1 or 2) AND (3 or 4or 5) and	wellbeing	23	7			
46	(1 or 2) AND (3 or 4or 5) and	well-being	64	25			
47	(1 or 2) AND (3 or 4or 5) and	quality of life	34	22			
48	(1 or 2) AND (3 or 4or 5) and	happy/happiness	13	5			
			134	59	27	0	27
49	(1 or 2) AND (3 or 4or 5) and	environment	82	42			
50	(1 or 2) AND (3 or 4or 5) and	noise	2	1			
51	(1 or 2) AND (3 or 4or 5) and	litter	0				
52	(1 or 2) AND (3 or 4or 5) and	pollution	1				
			85	43	17	0	1
TOTAL			801	478	154	0	154

NOTES

^{*}always include plural

^{*}all combine searches to include search terms 1-5

AFFEINDI	IX 5e: CASE systematic revie	ew results: neritag	<u>e</u>		1	2	3	4	5	6
Search						Intra-group duplicates	Screen for relevance on	Screen for relevance on	Inter-group duplicates	Total for
term					Number of hits			abstract/length		review
1		Heritage			Number of files	removed	titic/ianguage	abstract/ icligiti	Temoved	TCVICV
2	or	Heritage								
_	OI .									
3	and	participant/particip	ants/participa	tion/participating						
4	or	engage/engageme	ent/engaging							
5	or	volunteer/voluntee	ring/volunteers							
Total										
6	(1 or 2) AND (3 or 4or 5) an	nd	social ber	efit/benefits	2		2	2		
7	(1 or 2) AND (3 or 4or 5) an	nd	social cos	t/costs	0					
8	(1 or 2) AND (3 or 4or 5) an	nd	social imp	act/impacts	5		3	3		
9	(1 or 2) AND (3 or 4or 5) an	nd	social valu	ue/values	1		1			
10	(1 or 2) AND (3 or 4or 5) an	nd	intangible	cost/costs	0					
11	(1 or 2) AND (3 or 4or 5) an	nd	intangible	benefit/benefits	0					
12	(1 or 2) AND (3 or 4or 5) an	nd	externaliti	es	0					
13	(1 or 2) AND (3 or 4or 5) an	nd	non-marke	et cost/costs	0					
14	(1 or 2) AND (3 or 4or 5) an	nd	non-marke	et benefit/benefits	0					
					8		6	3	0) 3
15	(1 or 2) AND (3 or 4or 5) an	nd		health care cost/costs	0					
16	(1 or 2) AND (3 or 4or 5) an	nd		value of health change	0					
16a	(1 or 2) AND (3 or 4or 5) an	nd		health benefit/benef	0					
					0		0	0	0) 0
17	(1 or 2) AND (3 or 4or 5) an	nd		crime	0					
18	(1 or 2) AND (3 or 4or 5) an	nd		vandalism	0					
19	(1 or 2) AND (3 or 4or 5) an	nd		delinquency	0					
20	(1 or 2) AND (3 or 4or 5) an	nd		anti-social behaviour/be	0					
21	(1 or 2) AND (3 or 4or 5) an	nd		youth offender/offendin	0					
22	(1 or 2) AND (3 or 4or 5) an	nd		recidivism	0					
					0		0	0	0	0
23	(1 or 2) AND (3 or 4or 5) an			diversion	0					
24	(1 or 2) AND (3 or 4or 5) an	nd		community safety	0					
25	(1 or 2) AND (3 or 4or 5) an	nd		community cohesion	1		1			
26	(1 or 2) AND (3 or 4or 5) an			civil society	1		C)		
27	(1 or 2) AND (3 or 4or 5) an	nd		citizenship	1					
					3		1	1	1	

28	(1 or 2) AND (3 or 4or 5) and	social capacity	0				
29	(1 or 2) AND (3 or 4or 5) and	education/educate/edu	22	12			
30	(1 or 2) AND (3 or 4or 5) and	academic/academics	4	3			
	(26	15	3	3	C
31	(1 or 2) AND (3 or 4or 5) and	excellence/excellent	2	0			
32	(1 or 2) AND (3 or 4or 5) and	preservation value/value	0				
33	(1 or 2) AND (3 or 4or 5) and	option value/values	0				
34	(1 or 2) AND (3 or 4or 5) and	existence value/values	0				
35	(1 or 2) AND (3 or 4or 5) and	bequest value/values	0				
			2	0	0	0	C
			_				
36	(1 or 2) AND (3 or 4or 5) and	social capital	3	3			
37	(1 or 2) AND (3 or 4or 5) and	social integration	0				
38	(1 or 2) AND (3 or 4or 5) and	social cohesion	0				
39	(1 or 2) AND (3 or 4or 5) and	social inclusion	2	2			
40	(1 or 2) AND (3 or 4or 5) and	social exclusion	0	_			
			5	5	5	0	5
41	(1 or 2) AND (3 or 4or 5) and	regeneration	3	2			
42	(1 or 2) AND (3 or 4or 5) and	neighbourhood renewal	0	_			
		3	3	2	2	0	2
43	(1 or 2) AND (3 or 4or 5) and	public good/goods	1	1			
44	(1 or 2) AND (3 or 4or 5) and	merit good/goods	0	_			
			1	1	1	0	1
			_	_			_
45	(1 or 2) AND (3 or 4or 5) and	wellbeing	0				
46	(1 or 2) AND (3 or 4or 5) and	well-being	2	1			
47	(1 or 2) AND (3 or 4or 5) and	quality of life	6	4			
48	(1 or 2) AND (3 or 4or 5) and	happy/happiness	0				
		1117: 111	8	5	4	0	4
49	(1 or 2) AND (3 or 4or 5) and	environment	9	4			
50	(1 or 2) AND (3 or 4or 5) and	noise	0				
51	(1 or 2) AND (3 or 4or 5) and	litter	0				
52	(1 or 2) AND (3 or 4or 5) and	pollution	0				
	, , , , , , , , , , , , , , , , , , , ,	F	9	4	3	3	(
TOTAL			65	39	22	7	1!

NOTES

^{*}always include plural

^{*}all combine searches to include search terms 1-5

APPENDIX 5f: CASE update systematic review results: MLA

					AdditionalRef removed/not	
		Screen for	Database	Screen for	included in	
	Number of	relevance on	duplicates	relevance on	literature	
Database	hits	title	removed	abstract	tables)	Total used
Econlit	1483	21	3	3	5	5 1
Education Resources Information Centre	43	2	C	(
PsycINFO	10	0	C	(
Social Science Citation	237	8	2	2	3	1
Social services Abstracts	166	6	C) 2	2	2
Sociological Abstracts	12	0				
Applied Social Sciences Index	111	3	C	(
Others	319	11	2	2	3	3
Totals	2381	51	7	15	13	2

APPENDIX 5g: CASE update systematic rev	<u>riew results: Ar</u>	ts and Culture				
	Number of	Screen for	Database	Screen for	AdditionalRef removed/not included in	
Database	hits	relevance on title	duplicates	relevance on	literature	Total used
			removed	abstract	tables)	Total used
Econlit	2373	21	4	. 4	. 2	. 2
Education Resources Information Centre	123	10	O	2	2	
PsycINFO	23	0				
Social Science Citation	397	4	0	1	1	
Social services Abstracts	265	12	0	3	3	
Sociological Abstracts	15	0				
Applied Social Sciences Index	171	5	O	1	1	
Others	928	12	1	. 2	2	
Total	4295	64	. 5	13	11	. 2

APPENDIX 5h: CASE update systematic review results: Heritage

		Screen for relevance on	Database duplicates	Screen for relevance on	AdditionalRef removed/not included in literature	
Database	Number of hits		removed	abstract	tables)	Total used
Econlit	599	12	ϵ	3	3	C
Education Resources Information Centre	32	0	C	0	0	C
PsycINFO	8	0	C	0	0	C
Social Science Citation	112	7	1	. 2	. 2	C
Social services Abstracts	61	4	C	1	. 1	
Sociological Abstracts	5	0	C	0	0	C
Applied Social Sciences Index	69	3	1	. 1	. 1	C
Others	374	9	C	3	3	C
Totals	1260	35	8	10	10	0

APPENDIX 5i: National Benefits Hub results: MLA

		Screen for	Inter-group		Removed	
		relevance on	duplicates	Total for	literature after	
Search Term	No of hits	title/language	removed	review	review	Total
Social benefit	112	15		2 13	11	2
Social impact etc	66	11		1 10	10	0
Non-market cost	35	6	5	0	6	0
Non-market benefit	58	4		0	3	1
Health benefit	12	0		0		0
Anti-social behaviour	3	0)	0		0
Happiness	14	1		0	ι 0	1
Social capital	18	0		0		0
Education	72	6	5	0 6	5 5	1
Crime	22	0		0		0
Wellbeing	12	2		0 2	2 2	0
Conclusion	0					0
Totals	424	45		3 42	37	6

APPENDIX 5k: National Benefits Hub results: Heritage

APPENDIA Sk. National benefits hub resu	its. Heritage					
		Screen for	Inter-group		Removed	
		relevance on	duplicates	Total for	literature after	•
Search Term	No of hits	title/language	removed	review	review	Total
Social benefit	21	3		0	3	2 1
Social impact etc	12	2		0	2	1 1
Non-market cost	2	1		0	1	L C
Non-market benefit	3	1		0	1	L C
Health benefit	0	0		0		
Anti-social behaviour	1	1		0	1 () 1
Happiness	0	0		0		
Social capital	2	0		0		
Education	0	0		0		
Crime	0	0		0		
Wellbeing	0	0		0		
Conclusion	0	0		0		
Totals	41	8		0	8 5	3

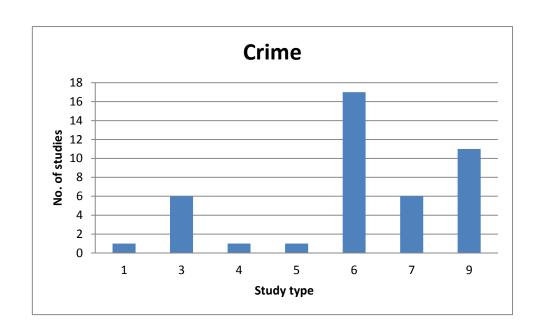
APPENDIX 5j: National Benefits Hub results: Arts

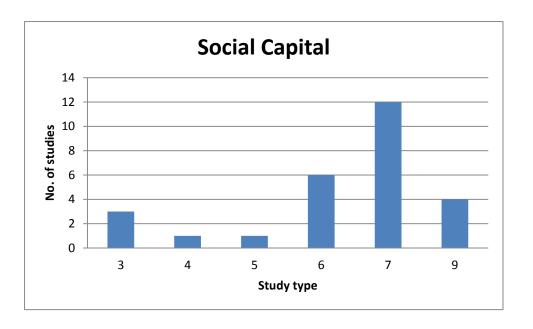
		Screen for	Inter-group		Removed	
		relevance on	duplicates	Total for	literature after	
Search Term	No of hits	title/language	removed	review	review	Total
Social benefit	113	9	:	1 8	6	2
Social impact etc	68	7		1 6	6	
Non-market cost	37	4		0 4	4	
Non-market benefit	55	6	:	1 5	4	1
Health benefit	3	1		1 2	2	
Anti-social behaviour	4	1		0 1	1	
Happiness	12	2		0 2	2	
Social capital	19	4	. (0 4	4	
Education	44	7		1 6	6	
Crime	12	2		0 2	2	
Wellbeing	12	0		0	0	
Conclusion	0	0		0	0	
Totals	<i>379</i>	43		5 40	37	3

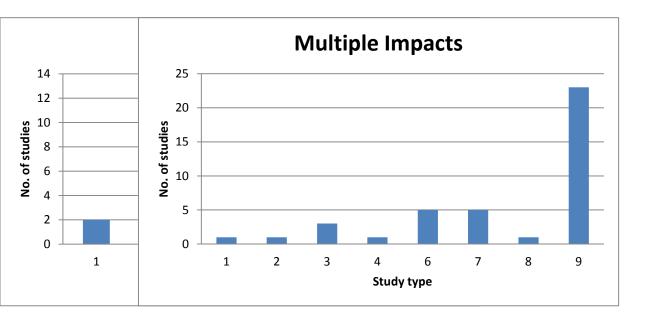
Appendix 6: Hierarchy of evidence, classification of sport studies

Key:

Numbe	er Study ty	ne									2%		■ Systematic review and meta-
1		ic reviews	analyso	-						5%	%	analysis ■ Randomised Control Trial	
2		sed Contro											- Kandonnised Control IIIai
			Jileu II	iais (RC	,15)				23%				■ Cohort Studies
3	Cohort st											18%	■ Time-Series Study
4	Time-seri												
5	Case-cor	ntrol											■ Case-Control
6	Cross-se	ctional sur	vey					5%				1%	Cross-Sectional Studies
7	Case stu	dy/prograr	nme e	valuatior	ns							6%	■ Case Studies / Programme
8	Economi	c evaluatio	ns										Evaluation
9	Narrative	reviews							12%				■ Economic Evaluation
10	Policy brief												■ Narrative Reviews
	Expert op	inion									26%		■ Policy Briefs / Expert Opinion /
		statemen	t										Scientific Statement
	<u> </u>					He	alth						
		25 7											
		20 -											
10		1 1											
<u>ë</u> 8 —		No. of studies											
No. of studies		y 10											
s 4		S TO											
9 2 —		5 -											
0		0											
ŭ	3		1	2	3	5	6	7	8	9	10		
						;	Study typ	e					







Appendix 7: Literature summaries for Social Impacts of Sport

Introduction

Each of the tables in Appendix 7 are structured in order of the hierarchy of evidence (see Table 2.3 in main report). For example, Table A7.1 begins with seven systematic reviews, followed by two meta-analyses, followed by three randomised controlled trials studies, etc. The type of study is indicated in the third column. Within each category the references are listed alphabetically.

Table A7.1 Summary of Sport/Exercise and Health

Authors (sources)	Sport/ exercise & country	Study type in evidence hierarchy	Sample	Findings
Keogh <i>et al.</i> (2009) (CASE)	Exercise (Dance)	Systematic review		Physical health (+) Grade B* level evidence (RCT<100) suggests that older adults can significantly improve their aerobic power, lower body muscle endurance, strength and flexibility, balance, agility and gait through dancing. Grade c evidence suggests that dancing might improve older adults' lower body bone mineral content and muscle power, as well as reduce the prevalence of falls and cardiovascular health risks. Further research needed to evaluate the relative effectiveness compared to other forms of exercise
Lee and Skerrett (2001) (BH)	PA and exercise/fitn ess	Systematic review		Physical health (+) There is an inverse linear dose-relationship between volume of activity and all cause-mortality dose - response
Maffulli <i>et al.</i> (2011)	Sports	Systematic review		Physical health (-) Physical injury is an inherent risk in sports participation and an inevitable cost of athletic training and competition. Injury may lead to incomplete recovery

(CASE)				and drop out. This review provides an updated synthesis of existing clinical evidence of long-term (LT) follow-up outcome of sports injuries. However, it concludes that few well conducted studies are available on LT follow up of athletes.
Mason and Holt (2012) (ASSIA)	Sport and exercise and physical activity	Systematic review		Mental health (+) Review of qualitative literature Physical Activity (PA) interventions provide positive social interaction and support; feeling safe; improved symptoms; a sense of meaning; purpose and achievement and identity. Facilitators (project personnel) highlighted as having an important role.
Pekka (2001) (BH)	PA and sport	Systematic review		Physical health (+) Weak evidence for a dose response of activity volume and health measures
Reid <i>et al.</i> (2000) (BH)	Sport and PA	Systematic review		Physical and mental health (+) This review reported on the beneficial effects of physical activity for women and girls.
Thompson Coon et al. (2011) (BH)	Exercise/ Outdoor physical activity	Systematic review		Mental health (+) Compared with exercising indoors, exercising in natural environments was associated with greater feelings of revitalization and positive engagement, decreases in tension, confusion, anger, depression, however feelings of calmness may be decreased. Note poor methodological quality of available evidence and outcome measures
Sowa and Meulenbroek (2011) (BH)	Exercise	Meta-analysis	16 behavioural studies reporting on 133 children and adults	Mental health (+) Effects of exercise on Autism Spectrum Disorders (ASD). All activity programmes yielded significant progress on the measures assessed but in

				terms of motor performance and social skills children and adults with ASD benefit most from individual (rather than group) exercise interventions
Tak <i>et al.</i> (2012) (BH)	Physical activity and exercise	Meta-analysis		Physical and mental health (+) This is the first meta-analysis to show that being physically active prevents and slows down the disablement process in aging or diseased populations, positioning PA as the most effective preventive strategy in preventing and reducing disability, independence and health care cost in aging societies.
Baker (2010) (BH)	Exercise (USA)	Randomised Controlled Trials (RCT)	6 month trial. 33 subjects diagnosed with amnestic mild cognitive impairment (mean age 70)	Mental and physical health (+) High intensity aerobic exercise/stretching control intervention. For older women at risk of cogitative decline, aerobic exercise improves performance on multiple tests of executive function, increased glucose disposal, brain derived neurotropic factor. For men there were some but fewer reported effects.
Courneya <i>et</i> <i>al.</i> (2011) (BH)	Exercise and physical activity (Canada)	Randomised Controlled Trial (RCT)	320 postmenopausal women	Physical health (+) Compared a 1 year exercise intervention to a sedentary lifestyle. It found a moderate to vigorous aerobic exercise programme prevents decline in the physical aspects of Quality of Life (QOL) in postmenopausal women. Exercise may have a potentially important advantage for breast cancer prevention compared to other lifestyle or biomedical interventions.
Wolf <i>et al.</i> (1996) (CASE)	Tai Chi(USA)	Randomised Control Trial (RCT)	200 participants mean age 76.2	Physical health (+) RCT with 3 arms (Tai Chi (TC); computerised balance training; Education). 15 week intervention. TC was found to reduce the risk of multiple falls by 47.5%. The paper concludes that a moderate TC intervention can impact favourably on defined biomedical and psychosocial indices of frailty

Aarnio (2003) (BH)	Sport and physical activity (Finland)	Cohort study	4906 cohort size (adolescents - 75.8%-81.7% response rate). 3 years	Physical health (+) Active adolescents smoke less than inactive ones and have better self-reported health.
Audrain- McGovern (2006) (CASE)	Sports (USA)	Cohort study	361 students of European ancestry across 5 public schools (survey data collected annually grade 9-12)	Physical health (+) For adolescents participating in at least 1 team sport, physical activity had a significant negative effect on smoking progression. In addition, having 2 smoking risk genotypes had a positive effect on physical activity
Bowen (2012) (Physical Education Index)	Sport and PA (USA)	Cohort study	808 adults over age 71	Mental health (+) Older adults who were physically active were 21% less likely than their counterparts to be diagnosed with dementia.
Buchman et al. (2012) (BH)	Exercise and Physical activity (USA)	Cohort study	716 older adults (4 years)	Mental Health (+) A higher level of total daily physical activity is associated with a reduced risk of Alzheimer disease
Buchman et al. (2012a) (BH)	Exercise and Physical activity (USA)	Cohort study	893 older adults (4 years)	Physical health (+) Mortality/Longevity – link between daily physical activity and death. Active lifestyles may augment longevity and physical health in old age.

Byberg <i>et al.</i> (2009)(BH)	Exercise and physical activity (Sweden)	Cohort study	2205 men	Physical health (+) Increased physical activity in middle age is eventually followed by a reduction in mortality to the same level as seen among men with constantly high activity. This reduction is comparable with that associated with smoking cessation.
Etgen <i>et al.</i> (2010)(BH)	Exercise and physical activity (Germany)	Cohort study	3903 participants older than 55 years.	Mental health (+) Moderate or high physical activity is associated with a reduced incidence of cognitive impairment after 2 years in a large population-based cohort of elderly subjects.
Gallegos- Carillo <i>et al.</i> (2012) (BH)	PA and sport (Mexico)	Cohort study	1335 participants over a period of 6 years	Mental health (+) Individuals with a higher activity level have a lower risk of developing depressive symptoms as compared to those with inactive or moderate PA pattern. PA may reduce risk of depression in Mexican adults. Highly active PA pattern reduced the risk of depression by about 56%.
Gierach <i>et al.</i> (2009) (BH)	Physical activity, sport and exercise (USA)	Cohort study	Baseline study population 225,468. Women aged 50-71 from NIH-AARP Diet and Health Study cohort. 109,621 included in the baseline Physical Activity analysis	Physical health (+) Increased frequency of vigorous physical activity, but not activity of lower intensity was associated with a 23% reduced RR of endometrial cancer. The association with vigorous activity appeared to be stronger among overweight and obese occupational physical activities. Number of hours spent sitting per day, but not watching TV, was related to an increased risk of endometrial cancer, and the association was statistically independent of BMI in this model.
Gow et al. (2012) (BH)	Exercise and PA (USA)	Cohort study	691 adults examined over a period of 3 years	Physical health (+)

				PA associated with less atrophy and white matter lesion (WML). Its role as a neuroprotective factor is supported
Holahan and Suzuki (2004) (CASE)	Sport and exercise (USA)	Cohort Study	162 members of the Terman Study of the Gifted (mean age of 86.36)	Physical health (+) The study investigated adulthood predicators of health-promoting behaviour in later aging. Perceived health in adulthood was related several factors including exercise and physical recreation. Gender played a moderating role.
Houston et al. (2002)	Sports (USA)	Cohort study	1019 white male medical students	Physical health (+) The findings support the association between sustained activity in aerobic sports and lower risk of cardiovascular disease (CVD).
Jedrziewski et al. (2010) (BH)	Exercise (USA)	Cohort study	National Long Term Health Care survey. Sample of 5280.	Mental health (+) Study results from National Long Term Care Survey data provide evidence supporting the potential for exercise to lower the risk of dementia.
Lahti <i>et al</i> . (2012) (BH)	Physical activity and exercise (Finland)	Cohort study	Helsinki Health cohort study. Sample n=8960 yr. 1; 7332 yr. 2). 4182 middle-aged adults were analysed (aged 40-60)	Physical health (+) Inactive women and men who increased their physical activity to vigorously active had a significantly lower risk of both self-certified and medically certified subsequent sickness absence spells compared with the persistently inactive. The persistently active with vigorous intensity had the lowest risk of sickness absence.
Leitzmann et al. (2008) (BH)	Sport and physical activity (USA)	Cohort Study	32,269 postmenopausal women with breast cancer	Physical health (+) Breast cancer risk reduction appeared to be limited to vigorous forms of physical activity and exercise; it was apparent among normal weight women but not overweight women, and the relation did not vary by hormone receptor

				status. The findings suggest that physical activity acts through underlying biological mechanisms that are independent of body weight control.
Moore <i>et al.</i> (2012) (BH)	Physical activity (vigorous intensity) (USA)	Cohort study	654,827 participants	Physical health (+) More leisure time physical activity was associated with longer life expectancy across a range of activity levels and BMI groups.
Parsons <i>et al.</i> (2011) (BH)	Physical activity and exercise (USA)	Cohort study	1695 participants from the Osteoporotic Fractures in Men Study (MrOS)	Physical health (+) In older men, obesity and higher physical activity are associated with increased and decreased risks of incident lower urinary tract symptoms (LUTS), respectively. Prevention of chronic urinary symptoms represents another potential health benefit of exercise in elderly men.
Peters <i>et al.</i> (2009) (BH)	Physical activity (USA)	Cohort study	Baseline population of 241,228 women aged 50-71 in the NIH-AARP Diet and Health Study. 182,862 retained for analysis	Physical health (+) Physical activity was associated with reduced postmenopausal breast cancer risk, particular to Estrogen Receptor-negative tumours. It found that the most active women experienced 13% lower breast cancer risk verses inactive women.
Rolandsson and Hugoson (2003) (CASE)	Sport (ice hockey) (Sweden)	Cohort study	132 boys	Physical health (-) The study showed an increase in tobacco usage among ice hockey players. They found that the environment in which ice hockey in Sweden is practiced can in itself constitute a risk for tobacco usage becoming established among ice-hockey playing adolescents.
Sun <i>et al.</i> (2010) (BH)	Physical activity,	Cohort study	Cohort study of 121,700	Physical and mental health (+)

	sport and exercise (USA)		registered female nurses. Sample of 13,535 for analysis	Higher levels of midlife physical activity are associated with exceptional health status among women who survive to older ages and corroborate the potential role of physical activity in improving overall health.
Taliaferro et al (2011) (CASE)	Sports (USA)	Cohort study	5 year study, 739 participants in middle and high school	Mental health (+) Compared to non-participants, youth who participated in sport in middle and high school had lower odds of suicidal ideation during high school concluding that remaining involved in sport can offer mental health benefits
van Mechelen et al. (2011) (CASE)	Physical activity and sports (Netherland s)	Cohort study	995 children (aged 10-12)	Physical health (-) PA-related injuries are common in children and result in high associated costs. Girls are at higher risk of injury. Higher costs associated with upper extremity injury. Interventions that prevent upper extremity injuries will have the greatest ST impact for public health
Xu <i>et al</i> . (2010) (BH)	Physical activity and exercise (USA)	Cohort study	213,701 participants of the NIH-AARP Diet and Health Study cohort. (Ages 50-71)). 767 cases used in analysis	Mental health (+) Epidemiologic evidence suggests that moderate to vigorous exercise in mid or later life may protect against Parkinson's disease.
Apekey et al. (2012) (Physical Ed.)	Exercise and physical activity (UK)	Case-control	60 overweight/obese adults. 20 completed the study; 18 control	Physical health (+) Diet and exercise intervention Moderate-intensive exercise/PA could significantly improve the cardiorespiratory fitness (blood pressure, lung age and VO2 max) and reduce cardiovascular disease
Babyak <i>et al.</i> (2000) (BH)	Exercise (USA)	Case-control	156 adults	Mental health (+)

			10 month study	Exercise Intervention. Among individuals with major depressive disorders (MDD) exercise therapy is feasible and is associated with significant therapeutic benefit, especially if continued over time. Comparison with sertraline therapy; combination of exercise and sertraline therapy.
Grau <i>et al.</i> (2009) (CASE)	Sports (Germany)	Case-control	370 case/control subjects	Physical health (+) Sports activities protect against stroke. Continuing lifetime activity OR starting during later adulthood is required to reduce stroke activity. Study showed a reduced risk of stroke with increasing hours of exercise although this was not statistically significant. Intensity of exercise was not quantified.
Held <i>et al.</i> (2012) (BH)	Physical activity, sport and exercise (52 countries)	Case-control	24,260 participants (10,043 cases and 14,217 age and sex-matched controls)	Physical health (+) Leisure time Physical activity and mild- to-moderate occupational Physical Activity, but not heavy physical labour, were associated with a reduced risk of CVD, while ownership of a car and TV was associated with an increased risk across all economic regions.
Kaufman et al. (2012) (ASSIA)	Sport (Dominican Republic)	Case-control	397 interviews with 140 adolescents	Physical health (+) Quasi-experimental trial to assess the effectiveness of a sports-based intervention (grassroots soccer) to prevent HIV. The study suggests that sports-base interventions could play a valuable role in HIV prevention in the Caribbean, particularly targeting young adolescents.
Lee <i>et al.</i> (2012) (BH)	Sport and PAs (China)	Case-control	1,000 in total (500 patients, 500 controls)	Physical health (+) The control subjects reported significantly longer duration of strenuous sports and moderate activity in daily life than the ovarian cancer patients. Increased engagements in such leisure time activities were associated with reduced cancer risks after adjustments for confounding factors. A significant inverse dose-response relationship was also found for total physical activity exposure.

Lin et al.	Tai Chi	Case-control	1200 people 65+	Physical health (+)
(2006) (CASE)	(Taiwan)		6 rural villages	Tai Chi can prevent a decline in functional balance and gait among older people. However, the reduction in injurious falls attained with Tai Chi did not reach statistical significance.
Pontifex <i>et al.</i> (2012) (BH)	Exercise (USA)	Case-control	40 participants (20 control group, 20 with ADHD)	Mental health (+) Single bouts of moderately intense aerobic exercise may have positive implications for aspects of neurocognitive function and inhibitory control in children with ADHD.
Schmidt et al. (2012) (CASE)	Physical activity and sport (Germany)	Case-control	302 (158 lung cancer participants; 144 control)	Physical health (+) Participants who were physically active are at lower risk of lung cancer than those who are not. Active participation in a sports club, number of friends and relatives had no statistically significant influence on the development of cancer.
Temple <i>et al</i> . (2008) (BH)	Exercise and Physical activity (Canada)	Case-control	12 week low intensity exercise programme 36 programme participants; 22 non-participants	Mental health (+) Exercise intervention. Findings revealed that statistically significant improvements in self-reported health and self-efficacy for exercise in the programme participant group as compared with non-participants. Small sample/study
Thijs <i>et al.</i> (2012) (ASSIA)	Sport and exercise (Netherland s)	Case-control	18 week rehabilitation programme: 72 intervention group; 38 control group	Physical health (+) Exercise intervention/Programme evaluation. The paper focuses on rehabilitation using high intensity physical training and long term return to work in cancer survivors. It found patients in the intervention group showed significant less reduction in working hours per week and quicker return to (partial) work.

Brosnahan (2004) (CASE)	Physical activity and sports (Texas, USA)	Cross- sectional study	1870 Hispanic and non-Hispanic white adolescents aged 14-18	Mental health (+) PA has a beneficial effect on feelings of sadness and suicidal behaviours in Hispanic and non-Hispanic white boys and girls
Grice and Conaghan (2011) (CASE)	Physical activity and sport (UK)	Cross- sectional study	Online survey 1002 non-elite sports participants	Physical health (-) Survey findings – 56% of active participants reported sustaining an injury they believed to be connected to sport or exercise. The paper explores perceptions of consequences of long term injury and care pathways
Griffiths <i>et al.</i> (2010) (BH)	Sport (UK)	Cross- sectional study	13470 Children aged 5 years	Mental health (+) Children who participated in sport had fewer total difficulties and more prosocial behaviours. The findings suggest a positive association between sport and better mental health. Further research based on longitudinal data is required to examine causal pathways in these associations and to determine the potential role in preventing mental health disorders
Grimmer et al. (1999) (CASE)	Sport and recreation (Australia)	Cross- sectional study	3538 students	Physical health (-) Injuries amongst students playing sport are common (one body part injured for every 3 participations), but mostly minor. Significantly higher risk of year 7 students injuring themselves compared to year 10. Elevated risk in some sports. Information on injury management for young people
Hakkinen et al. (2009) (BH)	Exercise and Physical Activity (Finland)	Cross- sectional study	132 subjects (75% female, age ranged from 26 to 73 years)	Physical health (+) Among at-risk persons for type 2 diabetes, those physically more active had less depressiveness and lower body weight. Regular exercise and weight control may improve subjective health and reduce risk for type 2 Diabetes Mellitus and its consequences.

Hildebrandt et al. (2000) (CASE)	Physical activity and sports participation (Netherlands)	Cross- sectional study	2030 workers in various occupations	Physical health (neutral) Literature review showed inconsistent results with most studies showing no effect between musculoskeletal morbidity and physical activity indices. The survey similarly showed no association between participation in sports and or physical activity and musculoskeletal symptoms but sedentary activity is associated with higher low back pain and sick leave.
Hoevenaar- Blom et al. (2011) (CASE)	Sport (Netherlands)	Cross- sectional study	7451 men, 8991 women	Physical health (+) In this relatively active population, types of activities of at least moderate intensity, such as cycling and sports were associated with lower CVD incidence, whereas activities of lower intensity, such as walking and gardening, were not.
Jurak (2006) (CASE)	Sport (Slovenia)	Cross- sectional study	681 high school students (mean age 18)	Physical health (+) Participation on sport has a significant and positive impact on a healthy lifestyle and forming positive self identity
Kim <i>et al.</i> (2012) (BH)	PA and exercise (USA)	Cross- sectional study	7674 adult respondents	Mental health (+) Examined the relationship between PA and mental health and the optimal amount of physical activity. It established a hyperbolic dose-response relationship with an optimal range of 2.5-7.5 hrs. PA per week.
Klentrou et al. (2003) (CASE)	Physical activity and sport (Ontario, Canada)	Cross- sectional study	256 adolescents (mean age 14.3 years)	Physical health (+) Study examined the relationships between regular physical activity and several antecedents of health (fitness; body composition; upper respiratory tract infections (URTI). Evidence suggests that regular moderate exercise can lead to decreased incidence of URTI and illness in adolescents

Nieman et al.	Physical	Cross-	1002 adults (18-	Physical health (+)
(2010) (BH)	activity and exercise (USA)	sectional study	85 years) over 12 week period	Perceived physical fitness and frequency of aerobic exercise are important correlates of reduced days with upper respiratory tract infection (URTI) and severity of symptoms during the winter and fall common cold seasons.
Payne <i>et al.</i> (2006) (BH)	Leisure (USA)	Cross- sectional study	464 adults over 50	Physical and mental health (+) Broader reports leisure repertoire positively related to perceived physical and mental health
Pratt <i>et al.</i> (2000) (BH)	Physical inactivity (USA)	Cross- sectional study	US civilian men and non-pregnant women aged 15 and older who were not in institutions in 1987.	Physical health and health care costs (+) This paper estimated the direct medical costs of physical inactivity
Schnohr et al. (2005) (BH)	Sport and PA (Denmark)	Cross- sectional study	12028 adults 20- 79.	Mental health (+) With increasing PA there was a decrease in high level of stress; decrease in life dissatisfaction between sedentary persons and joggers. Dose-response effect between PA and psychosocial wellbeing. Largest advantage between sedentary and low PA group (2-4h of walking)
Taliaferro et al. (2010) (CASE)	Sports (USA)	Cross- sectional study	Adolescents (grade 9-12). Data from national Youth Risk Behaviour Survey (1999- 2007 bi-annual)	Physical health (+) Participation in organised sports affords many health benefits to most adolescents, but related to some negative health behaviours in certain sub groups. Among white students sports participation is related to multiple positive health behaviours. Conversely, African American, Hispanic and other athletes showed few positive health behaviours and some negative.

Terry McElrath et al. (2011) (BH)	Exercise (USA)	Cross- sectional study	289,503 8 th grade; 363,708 10 th and 12 th grade students.	Physical health (+) There appear to be substantive differences between exercise and team sport participation in relation to adolescent substance use. Frequent exercise appears to be associated strongly with lowered levels of adolescent alcohol, tobacco, and marijuana use for the general student population and school athletic team participants.
Tittlbach et al. (2011) (CASE)	Physical activity (Germany)	Cross- sectional study	2291 German adolescents aged 11-17	Physical health (+) The amount of physical activity explains up to 12.6% the variance of physical and psychosocial health resources, but only 2.5% of psychosocial health deficits. It concludes that PA reduces physical and psychosocial health deficits in adolescents
Bowles <i>et al.</i> (2011) (BH)	Cycling (USA)	Case study	Individual cyclists, bicycle specific retail businesses and bicycle organisations.	Physical health (+) Cycling can reduce prevalence of diseases relating to obesity and sedentary lifestyles. The estimated savings from existing commuter cyclers for the state of Iowa are \$13,266,020; total savings for recreational riders are \$73,942,511.
Cheville et al. (2012) (ASSIA)	Exercise (USA)	Case study	20 adults (half male; half over 65)	Physical health (+/-) Qualitative study. No case control. This paper examined the effectiveness of exercise as a potential means of controlling the symptoms experienced by people in advanced stages of terminal illness (lung cancer). The paper suggests that the use of exercise to lessen symptoms and improve function first requires linkage to various factors including linkage to patients usual and past activities.

Ghosh and Datta (2012) (ECONlit/CA SE update)	Sport (India)	Case study	31 children with mental retardation	Physical and mental health (+) The study showed that number of years in sports activities was a significant factor responsible for improving the functioning of children with mild to moderate mental retardation. No case control
Hodgson <i>et</i> <i>al.</i> (2011) (BH)	Sport and physical activity (UK)	Case study	17 interviews	Mental health (+) Study aimed to examine the perceived effects of physical activity in a community-based sport and physical active programme (ACTIVE) on mental wellbeing. The qualitative study indicated positive benefits to mental wellbeing, physical health and social opportunities. No case control.
Lyons <i>et al.</i> (2009) (BH)	Sport (USA)	Case study	42 parents	Mental and physical health (+) Perceived positive benefit of recreational activities for children with disability and their families, from the parents' perspective. No comparison/control.
Alburquerque -Sendin et al. (2012) (Physical Education Index/case update)	Aerobic exercise and physical activity (Brazil)	Programme evaluation	31 60-65years 33 >65years	Physical health (+) Physical activity program 123 sessions over 52 weeks. No case control Physical activity adapted to older women can effectively change the decline in physical activity associated with aging.
Milligan (2012) (ASSIA)	Exercise (England)	Programme evaluation	115 patients from 230 referrals	Physical health (+) Clear evidence of benefit from participation in cardiac rehabilitation programme. No case control.
Wynaden et al. (2012) (ASSIA)	Exercise (Australia)	Programme evaluation	56 Patients. 6 month evaluation	Mental health (+) Exercise intervention. No case control. Findings suggest benefits on mental health outcomes for people with psychotic illness and are hospitalised in an

			acute secure setting. Programme assisted in managing psychiatric symptoms and improving fitness confidence and self-esteem.
Annemans et al. (2007) (BH)	Physical exercise (Belgium)	Economic Evaluation	Health Care Costs (+) This study evaluated the long term health and economic outcomes of controlled and maintained physical exercise in a fitness setting. Controlled and maintained physical exercise is projected to be cost-effective, which is likely to be explained by its simultaneous effect on several diseases and the associated weight loss, which affects QOL positively.
Cadilhac et al. (2011) (BH)	Physical inactivity (Australia)	Economic evaluation	Health care costs (+) This paper estimates the health and economic benefits of reducing the prevalence of physical inactivity. Economic benefits were estimated as opportunity cost savings.
California Center for Public Health Advocacy. (2009) (BH)	Physical inactivity (USA)	Economic evaluation	Physical health and health care costs (+) The study determined projected costs for overweight, obesity, and physical inactivity among Californian adults. The results were based on both health care costs and costs associated with lost productivity.
Chenoweth and Leutzinger (2006) (BH)	Physical inactivity (USA)	Economic evaluation	Health care costs (+) This study quantifies the costs of physical inactivity and excess weight among American adults.
Colditz (1999) (BH)	Physical inactivity (USA)	Economic evaluation	Physical health and health care costs (+) The study utilised the most up to date estimates relating to obesity and inactivity to calculate economic cost. It found that the direct costs of inactivity and obesity account for some 9.4% of national health care expenditures in the USA.

Colman (2002) (BH)	Physical inactivity (Canada)	Economic evaluation		Physical health and health care costs (+) This report estimates the cost of physical inactivity in Nova Scotia, utilising the basic methodology of Katzmarzyk <i>et al.</i> (2000).
Katzmarzyk et al. (2000) (BH)	Physical inactivity (Canada)	Economic evaluation		Physical health and health care costs (+) Widely cited paper that estimates the direct health care costs for various diseases attributable to physical inactivity in Canada and the associated costs.
Marsh <i>et al.</i> (2010) (CASE)	Sport (England)	Economic evaluation	Uses data from British Household Panel Survey and Taking Part	Health care cost and benefits (+) The report derives economic values for engagement in sport. This report includes analysis of change in ST subjective wellbeing (SWB) from engagement in sport and estimates the long term health gains associated with doing sport. These effects are valued in terms of health care benefits and costs. In relation to health it estimates that the typical lifetime healthcare cost saving generated by doing sport varies between £1750 (badminton) and £6900 (health and fitness) per person. The total economic lifetime value generated by doing sport varies between £11400 (badminton) and £45,800 (health and fitness) per person. Variation in value depends on duration and frequency.
Popkin <i>et al.</i> (2006) (BH)	Physical inactivity (China)	Economic evaluation		Physical health (+) This study reviews the effects of poor dietary and physical activity patterns and obesity on morbidity, mortality and productivity. It links physical activity patterns to intermediary conditions and chronic diseases and measures the direct and indirect economic effects. In a case study of China it found the indirect effects of obesity and obesity-related dietary and physical activity patterns range between 3.58% and 8.73% of GNP in 2000 and 2025 respectively.

Roux et al. (2008) (BH)	Exercise and physical activity (USA)	Economic evaluation	7 interventions	Health care costs (+) Cost-effectiveness of community-based physical activity interventions was examined. All seven interventions evaluated were compared to non-interventions and appeared to reduce disease incidence and be cost effective (\$14,000-\$69,000per per quality-adjusted of life year (QALY)).
Aleman and Meyers (2010) (CASE)	Sport (mountain biking)	Narrative review		Physical health (-) The article provides information on the causation and risk factors associated with injury amongst young mountain bikers.
Allison (1999) (CASE)	Physical activity	Narrative review		Physical and mental health (+) Positive association between physical activity and physical health (onset of certain diseases and their treatment and rehabilitation) and mental health. Some reported risks of negative impact (accidents); injuries, undiagnosed cardiac diseases. Dose-response relationship is complex. Greatest population health gain would be derived from getting the inactive majority to increase their levels.
Cox (2012) (other)	Sport, recreation and physical activity	Narrative review		Physical and mental health (+) This report summarises current evidence relating to the impact of sport on society. It reviews evidence on the impact of physical activity on specific physical and mental health conditions.
Edmonton Sports Council (2010) (BH)	Sport and active recreation (Canada)	Narrative review		Physical health and health care costs (+) The review examines the benefits of investing in sport for personal health, the development of children and youth and individuals QOL.

Garrick and	Sports and	Narrative		Physical health (-)
Requa (2003) (CASE)	fitness	review		Negative consequences of musculoskeletal injuries sustained during sports participation in childhood adolescence may compromise function later in life, although there is limited long term evidence. In the absence of injury vigorous participation in sports and fitness activities during childhood and adolescence increases the likelihood of developing subsequent osteoarthritis.
Haskell <i>et al.</i> (2007) (BH)	PA/exercise (USA)	Narrative review		Physical health (+) Guidelines for physical health, dosage-response recommendations
Hui (2001) (BH)	Sport and physical activity (Hong Kong)	Narrative review		Physical health (+) PA and sport can be an effective method for the prevention and treatment of obesity, CHD, diabetes, colon cancer, stroke, hypertension, osteoporosis and mental health in Caucasian and Hong Kong (HK) Chinese populations. Most HK adults do not exercise enough to gain health benefits. Health care costs of physical inactivity are reported but need to be quantified for HK.
Macmillian Cancer Support (2011) (BH)	Physical activity and exercise (UK)	Narrative review	Review of 60+ studies; survey of 400 health professionals; reviewed findings from projects	Physical health (+) Physical activity and exercise can reduce the risk of dying from certain cancers and manage some of the long term debilitating side effects.
Mulholland (2008) (BH)	Sport and physical activity (Canada)	Narrative review		Physical health and health care costs (+) Report notes the positive role of sport and physical activity in improving health and wellbeing. Reports on the health care costs of mental illness and costs of physical inactivity

Leime and	PA/sport	Narrative	Physical and mental health (+)
O'Shea (2010) (BH)		review	Increasing amount of compelling evidence that engaging with physical activities and sport is associated with beneficial effects on the physical and psychological health and overall QOL of older people. This leads to substantial healthcare savings
Nicholson (2004) (CASE)	Physical activity and sport (Scotland)	Narrative review	Physical health (+) Evidence on the physical health benefits of regular physical activity is compelling; evidence on the mental health of regular physical activity is more complex and associations tend to be more indirect. Note this source is not peer reviewed and makes no direct reference to the sources used to draw conclusions.
Oughton and Tacon (2007) (other)	Sport	Narrative review	Physical and mental health (+) Summarises research evidence regarding the impact of sport on health and physical fitness, including psychological health and well-being. Concludes there is robust scientific evidence linking participation in sport/physical activity and reduced risk of certain diseases and mortality
Paterson et al. (2007) (BH)	Exercise and PA	Narrative review	Physical health (+) Current sedentary lifestyle of individuals contributes to the prevalence of disease. Exercise programmes can be used to prevent disease in older people
Spence <i>et al.</i> (2001) (BH)	Physical activity, exercise and sport (Canada)	Narrative review	Physical health (+) The report examines the health care benefits and costs of physical activity interventions and the usefulness of an outcomes model to frame actions. It concludes that the evidence for benefits that a physically active society will

				accrue is strong in terms of enhanced QOL, reduced disease and disability and reduced health care costs.
Street and James (2007) (BH)	Sport and PA (Australia)	Narrative review		Mental health (+) People who participate in sports clubs and organised recreational activity enjoy better mental health, are more alert and more resilient to the stresses of modern living.
Walsh (2011) (BH)	Exercise and Recreation	Narrative Review		Mental health (+) General - exercise offers physical benefits that extend over a multiple of body systems. It reduces risk of disorders and is therapeutic for physical disorders. It also offers preventative and therapeutic psychological benefits.
Warburton et al. (2006) (BH)	Exercise and Physical activity and exercise (Canada)	Narrative Review	Relies heavily on major systematic reviews; meta analyses and consensus statements	Physical health (+) The report confirms there is irrefutable evidence of the effectiveness of regular physical activity and fitness/exercise in the primary and secondary prevention of several chronic diseases. The report considers dose-response relationships for several diseases. Many instances this is linear.
Warburton et al. (2007) (BH)	Exercise and Physical activity and exercise (Canada)	Narrative Review	Relies heavily on major systematic reviews; meta analyses and consensus statements	Physical health (+) The report examines physical activity guidelines for Canadian adults in light of the evidence base. Physical activity appears to reduce the risk of over 25 chronic conditions.
Health and Human Services (2007) (BH)	Physical inactivity (USA)	Policy brief		Physical inactivity and health care costs (+) It uses estimates from Colditz (1999) and the Centres for Disease Control and Prevention.

Kahn and Norman (2012) (LGA/CASE update)	Sport (UK)	Policy brief	Health care costs (+) Review of evidence, funding and policy landscape relating to physical inactivity. Estimates of NHS costs as a result of inactivity £1billion-1.8 billion; costs of lost productivity to wider economy £5.5 billion from sickness and absence; £1 billion from premature death. Together inactivity costs approximately £8.3 billion per year (DoH, 2009).
Solomon (2002) (CASE)	Sports (USA)	Policy brief	Physical health (+) Participation in sports provides girls and young women with a multitude of physical and emotional health benefits, but also serves as an important tool in teen pregnancy prevention.
Thompson et al. (2003) (BH)	Exercise and physical activity	Scientific statement	Physical health (+) The American Heart Association statement summarises the evidence for the benefits of physical activity in the prevention and treatment of cardiovascular disease. The statement cites strong evidence including studies of RCTs and meta-analyses.

Table A7.2 Summary of Sport/Exercise and Wellbeing

Authors (sources)	Sport/exercise & country	Study type in evidence hierarchy	Sample	Findings
Lechner (2008) (CASE)	Sport (Germany)	Cohort study	German Socio Economic Panel Study (GSOEP) 1984-2006	Micro econometric study The study found that sports activities have a sizeable positive long term labour market effect in terms of earnings and wages as well as positive effects on health and SWB.
Pawlowski et al. (2011) Not in databases (edited book)	Sport (Germany)	Cohort study	German Socio Economic Panel Study (GSOEP) 22,019 cases (year 2004)	This study analyses the relationship between SWB and the availability of sports facilities in Germany. Their empirical results suggest that the availability of public sports facilities positively influences SWB. On average people living less than 10 or 10-20 minutes walking distance to public sports facilities are around 3-4% more likely to be satisfied with their life, health and leisure.
Downward and Rasciute (2011) (CASE)	Sport	Cross- sectional study	One wave of Taking Part data (2005). 28,117 respondents	The paper demonstrates that participation in sport has a positive effect on the SWB of the population, as estimated by happiness, and estimates its monetary value using a willingness to pay analysis. The paper examines if participation in and the frequency and duration of 67 sports activities affects wellbeing. It found that the effects are larger if one allows for interactions.
Downward and Rascuite (2011a)Not in databases (edited book) (edited book)	Sport (UK)	Cross- sectional study	Two waves of Taking Part data: (Wave 1: 28,117 respondents; Wave 24,174 respondents	Drawing on two waves of Taking Part data (not panel), this chapter reveals that Sport and PA have a positive effect on SWB. This chapter extends Rascuite and Downward (2010) by examining the separate waves of data (to explore the robustness of previous findings) and also by including a willingness to pay analysis (to add some scale to the benefits associated with physical activity).

Forrest and Mchale (2011) Not in databases (edited book)	Sport (UK)	Cross- sectional study	27989 adults in England from Taking Part	This paper examines the relationship between SWB and participation on sport and reveals that those that take part in sport are slightly happier than those that don't., although notes that sports participants possess unobserved characteristics unfavourable to happiness such that the benefit to them is greater than the raw data suggests (Rodriguez <i>et al.</i> , 2011)
Huang and Humphreys (2012) (BH)	Sport (USA)	Cross- sectional study	1,589,266 eligible responses living in 2,346 US Counties	The research uses US micro data (BRFSS survey - 2005-2009) and the US County Business Patterns data to investigate the relationship between participation in physical activity and self-reported happiness in the US. It reports that individuals living in a county with greater access to sports facilities are more likely to participate and report higher life satisfaction. It also develops evidence that the relationship between PA and happiness relates to the effect of physical activity on health.
Kavetsos (2011) Not in databases (edited book)	Sport (34 countries)	Cross- sectional study	Nearly 50,000 adults	This study examines the relationship between participation in sport and PA and SWB. The study confirms the hypothesis that SWB of individual increases through participation and with frequency of participation.
Landow (1997) (CASE)	Sport (USA)	Cross- sectional study	124 undergraduate students (18-23)	The study investigated the relationship of SWB in college student athletes with the type of sport played and motivation for participation. It found that those athletes participating in a sport requiring physical exertion reported the highest SWB on all three domains of SWB (social, physical, emotional) in addition to academic achievement
Malebo (2007) (CASE)	Sport (South Africa)	Cross- sectional study	293 black students aged 20-35 years old.	The study focused on whether young black adults who participate in sport differ in psychological wellbeing and psychosocial development from those who do not. Students who participate in sport have significantly lower levels of negative affect

				(e.g. pessimistic life orientation) and significantly higher levels of positive affect (e.g. self efficacy).
Rasciute and Downward (2010) (DCMS)	Sport	Cross- sectional study	Two waves of Taking part data: (Wave 1: 28117 respondents; Wave 24174 respondents	This paper uses econometric models to estimate the impact of sports participation on SWB (based on pooled data). It provides evidence that sports participation and physical activity have a broadly positive effect on SWB, but that cycling has some disutility
Marsh <i>et al.</i> (2010) (CASE)	Sport	Economic evaluation	Uses data from British Household Panel Survey and Taking Part	The report derives economic values for engagement in sport. This report includes analysis of change in Short Term SWB from engagement in sport and analysis of the Long Term health care benefits costs. In relation to SWB, the research establishes a statistically significant link with sports engagement. The analysis uses an income compensation (IC) approach to estimate the monetary value of outcomes. It suggests that doing sport once a week generates SWB the equivalent to a £11,000 increase in annual household income.
Bridges (2006) (CASE)	Sport (Hong Kong)	Narrative review		This book chapter argues that sport can positively contribute to happiness and wellbeing in two ways. Participation brings health benefits which enable us to experience life and work more effectively; Spectating can give us good feeling. It uses HK as a case study to examine the attributes of 4 actors (government; companies; fans and ordinary people) towards the "utility".
Galloway et al. (2006) (CASE)	Sport	Narrative review		Issues of cross disciplinary definition of QOL or wellbeing. Scarcity of empirical research in the area- the largely experimental work has not produced evidence of casual links. Concluded suggesting that future research needs to be conceptually clear, consider the variable quality of sports programmes as a factor affecting outcomes and develop more rigorous methods for collecting self-report data from participants

Table A7.3 Summary of Sport/Exercise and Crime/Delinquency

Authors (sources)	Sport/exercise & country	Study type in evidence hierarchy	Sample	Findings
Wilson & Lipsey (2000) (BH)	Wilderness activities, USA	Meta- analysis	28 studies, 3000 delinquents, age 10-18	29% recidivism rate for programme participants, c.f. 37% for comparison individuals. Other positive effect sizes for social skills, locus of control, self-esteem, psychological adjustment and school adjustment.
Begg <i>et al.</i> (1996) (CASE)	Sports, New Zealand	Cohort study	799 young people at ages 15 and 18	Males with high sports activity at age 15, and females with moderate or high sports activity at age 15, are more likely to be delinquent at age 18. No such association was found for team sports and no associations were found between sports and aggressive behaviour.
Dawkins et al. (2006) (CASE)	Sports	Cohort Study	24,599 young people, 1988 - 1994	Negative association between sports participation and marijuana use; positive association between sports participation and alcohol consumption for white students and black males, but negative association for black female students.
Endresen & Olweus (2005) (CASE)	Power sports, Norway	Cohort study	477 young males over two years	Higher power sports participation associated with increase in antisocial involvement.
Fauth <i>et al.</i> (2007) (CASE)	Sports, USA	Cohort study	1,315 young people aged 9 and 12, for six years.	Sports participation associated with fewer anxiety/depression symptoms, but higher delinquency and increase substance use over time.
Hartmann & Massoglia (2007) (CASE)	Sports, USA	Cohort study	1,000 young people, 1988 - 2002	One year more sport/exercise participation in high school is associated with a 24% decrease in the likelihood of shoplifting, and lower work fraud and minor citations; but those who participate in varsity or junior varsity are 65% more likely to report drunk driving, and more likely to report speeding, and angry or

				violent behaviour at work through to age 30. No relation found between sport/exercise and a general measure of delinquency over time.
Terry-McElrath & O'Malley (2011) (CASE)	Sports, athletics or exercise, USA	Cohort study	11,741 young people, 1986+	Higher sport/exercise participation associated with lower illicit drug use but higher alcohol consumption.
Veliz & Shakib (2012) (PsycInfo)	Sport (USA)	Time series study	3 national datasets, 1,180 high schools	Schools with higher proportions of sports participants have significantly fewer serious crimes and suspensions on school grounds, but the relationships are weaker than other control variables.
Wright <i>et al.</i> (1998) (CASE)	Sports (USA)	Case-control	70 at-risk youth	Project participants in a summer programme had significantly increased self- perceptions, scholastic competence, social competence, compared with a control group and participants in a traditional recreation programme.
Burton & Marshall (2005) (CASE)	Sports (UK)	Cross- sectional study	169 young people, age 14- 15	Strong positive correlation between sports participation and aggressive behaviour.
Carreres- Ponsoda et al. (2012) (Econlit)	Sport (Spain)	Cross- sectional study	363 students aged 12-19	Youths participating in out-of-school sport programmes have significantly higher levels of self-efficacy, pro-social behaviour and personal and social responsibility than youth participating in no activity.
Caruso (2011) (CASE)	Sports (Italy)	Cross- sectional study	20 regions x 7 years	Strong negative relationship between sports participation and property crime, and juvenile crime; but a weak positive association between sports participation and violent crime.
Gardner et al. (2009) (CASE)	Sports (USA)	Cross- sectional study	1,344 adolescents	Male sports participants' non-violent delinquency is higher than male participants in non-sports activities, mediated by higher peer deviance and more time in unstructured social activities. No relationship found between sports participation and violent delinquency, for either males or females.

Howie <i>et al.</i> (2010) (CASE)	Sports (USA)	Cross- sectional study	25,797 young people age 6-11	Sports participants had higher social skills index scores.
Jenkins & Ellis (2011) (CASE)	Combat sports (UK)	Cross- sectional study	50 combat sports participants	Positive average perceptions of the effect of combat sports participation on social relations, self-esteem, pro-social behaviour and education/work performance.
Jiang & Peterson (2012) (ASSIA)	Sports (USA)	Cross- sectional study	13,236 young people	Mixed results on relationship between sports participation and violent behaviour: negative for non-immigrant youth when combined with non-sport activities, but positive for first and second generation immigrant youth. Sport alone has no effect on violence for non-immigrant youth, but positive association with violence particularly for second generation immigrant youth.
Langbein & Bess (2002) (CASE)	Sports (USA)	Cross- sectional study	21 schools x 3 years	For most schools, widespread sports programmes reduce the rate and number of serious incidents and student suspensions, and this relationship is stronger for larger schools.
Metzger et al. (2009) (CASE)	Sports (USA)	Cross- sectional study	2,495 young people	No clear or systematic relationship between sports participation (alone or in combination with other participation) and problem behaviours.
Moesch <i>et al.</i> (2010) (CASE)	Sports (Switzerland)	Cross- sectional study	832 adolescents	Non-violent adolescents are more involved in individual aesthetic sports; violent adolescents are more likely to do game sports with body contact.
Nelson & Gordon-Larsen (2006) (CASE)	Sports (USA)	Cross- sectional study	11,957 adolescents	Those who engaged in relatively more frequent and intensive sports participation were less likely to engage in a variety of risky behaviours, including drunk driving, use of illegal drugs other than marijuana; but they were more likely to engage in violence.
Rhea & Lantz (2004) (CASE)	Sports (USA)	Cross- sectional study	338 young people in rural locations	Negative association between sports participation and violence and delinquent behaviour for males.

Rutten <i>et al.</i> (2007) (CASE)	Sports, (Netherlands)	Cross- sectional study	260 sportspeople, aged 12-18	8% of the variance in antisocial behaviour and 7% of the variance in pro-social behaviour is attributable to the sports teams and coaches, largely through a strong socio-moral reasoning effect.
Sagar <i>et al.</i> (2011) (CASE)	Sports (UK)	Cross- sectional study	331 university sportspeople	The number of years of competitive sports participation was positively related to antisocial behaviour in sport and at university; and had a joint effect with fear of failure.
Watkins (1999) (CASE)	Sport (Canada)	Cross- sectional study	590 secondary students	Organised sport participants (particularly in popular, team and contact sports) committed significantly more delinquency than non-participants. Mediating variables were age, gender, location of school and level of instruction, as well as other risk factors. Sport though is a minor delinquency risk factor, accounting for less than 2% of total delinquency variance.
Wright & Fitzpatrick (2006) (CASE)	Sports (USA)	Cross- sectional study	4,834 young people	No association identified between sports participation and adolescent violent behaviour
McKenney & Dattilo (2001) (CASE)	Basketball (USA)	Cross- sectional study	5 delinquents with behaviour disorders	Certain aspects of pro-social behaviour improved as a result of the intervention, i.e. encouraging and helping, but these were not sustained. No clear influence on antisocial behaviour was found.
Canadian Parks/ Recreation Association (1996) (BH)	Recreation programmes (Canada)	Case study	Focus groups: 64 mixed stakeholders	Barriers to participation in programmes include lack of money, transport, information and parental support; rigid structure and regulation of sport; competition with elimination; adult control; gender bias
Haudenhuyse et al. (2012) (ERIC)	Sport (Belgium)	Case study	35 interviews, 4 focus groups	Investigating possible reasons for a positive influence of sport on vulnerable youth, this study identifies some key issues in programme delivery: a perceptive attitude of participants' wellbeing; a motivational climate; authority relationships; socio-psychological competences in understanding and including everyone; the sports model with competition one element; working towards competence not

				just in sports technical skills but also in enjoyment of activities and nurturing youth development; and the coach's cultural capital.
Morris et al. (2003) (CASE)	Sports (Australia)	Case study	175 programmes	Mix of positive and negative findings with respect to effects of sports programmes.
Nevill & Poortvliet (2011) (CASE)	Sport (UK)	Case study	3 programmes	Evidence of reduced youth crime in one programme area and reduced re- offending by participants in two other programmes. Returns on investment are calculated for all three programmes - e.g. for every £1 invested in the first programme, £7.35 of social benefit is created in the form of financial savings to the police, the criminal justice system and victims/local communities.
Sandford et al. (2008) (CASE)	Sport & outdoor activities (UK)	Case study	2 programmes	Positive impact on behaviour of large numbers of pupils, but effects are individualised and context-specific. Programme design implications.
Sport England (2002) CASE	Sport & outdoor activities (UK)	Case study	1 programme	Evidence of decreased youth offending in local areas since the Positive Futures programme began. Uncertainty over impact on drug use
Audit Commission (2009) Not in databases	Sports (UK)	Narrative review		Sports programmes, properly designed, can help reduce youth crime cost effectively, compared with enforcement.
Carmichael (2008) (BH)	Sports (various)	Narrative review		Claims that organised youth sports can help to reduce youth crime.
Coalter (1996) (CASE)	Sport (UK)	Narrative review		Need for improved evaluation evidence. Male bias in programmes. Some adverse findings (e.g. increased aggression). Importance of process - NB leadership. Sport should not be used in isolation - it can be part of a solution.

Coalter (2005) (BH)	Sport (UK)	Narrative review	Identifies the following social benefits: health, education, community development, i.e. social capital and active citizenship; and youth crime.
Jamieson and Ross (2007) (BH)	Sports (various countries)	Narrative review	Potential for sports programmes to contribute to peaceful and productive relations with neighbours.
Nichols (2007) Not in databases	Sports (UK)	Narrative review	Text exploring theory and evidence of links between sports/physical activity programmes and reductions in crime
Sandford et al. (2006) (CASE)	Sports (UK)	Narrative review	Sport has the potential to re-engage disaffected youth but programme designs should recognise the importance of social relationships (particularly with the leaders); create a sense of community; be multi-agency; and ensure sustainability.
Sprouse and Klitzing (2005) (BH)	Recreation (USA)	Narrative review	Suggests largely positive outcomes from recreation programmes
Sport England (2008c) Not in databases	Sports (UK)	Narrative review	Sport can help to reduce youth offending and antisocial behaviour, increase culture of respect and tolerance among young people, reduce alcohol and drug misuse, and reduce fear of crime. But it needs a multi-agency approach.
Vinluan (2005) (BH)	Sport (USA)	Narrative review	Claims evidence that after-school programmes hosted by parks and recreation departments decrease juvenile crime and violence, drug use, smoking and alcohol abuse, and teen pregnancy.
Witt and Caldwell (2010) (BH)	Recreation (USA)	Narrative review	Claimed significant contributions in nine areas: reducing juvenile delinquency; increasing positive and reducing negative behaviours; less violence; improve educational performance; decrease healthcare costs; increase economic

		contributions; help youth self-confidence, optimism and initiative; increase civic
		responsibility and participation; reduce parental stress.

Table A7.4 Summary of Sport/Exercise and Social Capital

Authors (sources)	Sport/exercise & country	Study type in evidence hierarchy	Sample	Findings
Spaaij (2012b) (PsycInfo)	Soccer (Australia)	Cohort study	3 years with Somali refugees	Somali participants in football clubs demonstrate bonding social capital, e.g. with different clans; but more weak/mixed evidence of bridging and linking social capital.
Braddock et al. (2007) (CASE)	Sport (USA)	Cohort study	1,041 black students	Varsity sports participation positively associated with political participation but only for individual sports, not for team sports.
O'Connor & Jose (2012) (CASE)	Sport (New Zealand)	Cohort study	1,774 young people	For New Zealand European youths, participating in sports activities is associated with later benefits - social support and wellbeing.
Sherry & Strybosch (2012) (Econlit)	Soccer (Australia)	Time series study	4 years, 20 site visits	Reviews the improvements in bonding and linking social capital arising from participation in the community street soccer programme - including the influence of coaches and peers, social support from this network, communications skills, self-confidence, self-esteem, motivation for personal and social development, cross-cultural exchange, self and group identity, reductions in drug and alcohol abuse, and health improvements.
Ozer et al. (2012) (CASE)	Football (Turkey)	Case-control	76 young people, half with intellectual disabilities	Positive effects of sports programme on social competence, problem behaviour and friendship activity of youths with intellectual disabilities; and improving the attitude of youth without disabilities towards participants with intellectual disabilities.
Bloom <i>et al.</i> (2005) (BH)	Sport (Canada)	Cross- sectional study	2,006 adults	Respondent ranked different benefits in the following descending order: improved physical fitness and health; fun, recreation and relaxation; enhanced sense of achievement; more opportunities for shared family and household activities; improved social, analytical and life skills; opportunities to socialise and make new friends; and preparedness for sport competitions.

Hanson <i>et al.</i> (2001) (CASE)	Sports (USA)	Cross- sectional study	48 disabled people	Sports participants scored higher than non-sportspeople for social integration, as well as physical independence, mobility and paid employment or education.
Harvey & Levesque (2007) (CASE)	Sports volunteering (Canada)	Cross- sectional study	271 sports volunteers	Strong positive relationship between sports volunteering and measure of social capital.
Perks (2007) (CASE)	Sports (Canada)	Cross- sectional study	13,000 people	Eleven measures of community involvement as an adult were positively associated with previous participation in youth sport.
Tonts (2005) (CASE)	Sports (Australia)	Cross- sectional study	285 households + 40 people in a rural location	Sport is an important arena for the creation and maintenance of social capital; but it is fragile and can lead to social exclusion.
Spaaij (2012) (ERIC)	Sport (Brazil)	Cross- sectional study	Surveys: 129 participants, 28 stakeholders; interviews: 53 participants, 36 stakeholders	Evidence that the programme not only facilitates a network of people from similar socio-economic backgrounds, but also helps create and maintain linkages with institutional agents who can offer information and resources which would not otherwise be available. The latter is potentially critical in compensating for social and economic disadvantage, but their sustainability without external support mechanisms is doubtful.
Hallinan & Judd (2009) (CASE)	Professional Australian Football (Australia)	Case study	Print media and club recruiting managers	Australian football has seen a reduction in overt racism but a persistence of rules, dispositions and values that maintain a less obvious racism.
Holt <i>et al.</i> (2009) (CASE)	Sport (Canada)	Case study	40 young adults	It is not sports participation per se but rather social interactions with peers, parents and coaches, i.e. development of social capital, which helps young people develop life skills.

Misener and Doherty (2012)(Econlit)	Sport (Canada)	Case study	20 leaders of sports clubs	Evidence of several aspects of inter-organisational relationships that amount to a substantial basis for social capital, including multiple inter-organisational relationships, active initiatives to stimulate new relationships, good quality attributes in relationships, even to the point of friendships between organisations.
Bunde-Birouste et al. (2012) subsequent report (not in databases) from Nathan et al. (2010) (CASE)	Football (Australia)	Case study	Survey sample 142, +48 interviews	Participants reported being significantly more 'other group' orientated than a comparison group, with significantly less peer problems and higher pro-social behaviour.
Burnett (2006) (CASE)	Sport (South Africa)	Case study	18 interviews + 18 focus groups	Positive findings concerning participants' social capital, including social and emotional skills, reciprocity, and relationships.
Burnett (2009) (CASE)	Sports (South Africa)	Case study	Four programmes	Evidence in one programme of reduction in social distance between children and parents, and increased self-esteem and a sense of self-worth for unemployed volunteers; but dependency on external resources threaten the sustainability of bridging and linking ties.
Kay & Bradbury (2009) (CASE)	Sport (UK)	Case study	Survey sample 160 young people, 43 interviews	Involvement in a structured sports volunteering programme for young people shows evidence of strong benefits to participants, including leadership skills, confidence and communication and organisational skills, and increased social connectedness in a range of contexts.
Lyras (2007) (CASE)	Sport (Cyprus)	Case study	96 children & 20 instructors	An educational sport initiative for mixed Greek and Turkish Cypriot participants showed evidence of changes in attitudes and increased sense of community.

Peacock- Villada <i>et al.</i> (2007) (CASE)	Sport (Zambia & South Africa)	Case study	Surveys and interviews	Participants demonstrated improved identification of strengths in their lives, including support networks, improved self-efficacy and ways to improve resiliency. The programme also equipped trainers with facilitation techniques to build resilience in young people.
Vermeulen & Verweel (2009) (CASE)	Sport (Netherlands)	Case study	Two locations	In one programme, a third of survey respondents claimed to generate their social networks, their self-esteem and trust in others primarily through sport; whilst 30% changed their images and opinions of other ethnic groups through participation in sport. Both bonding and bridging were identified, in different types of clubs. The other programme has clear signs of bonding. But in both programmes the evidence of social capital is nuanced by the importance of identity.
Waring & Mason (2010) (CASE)	Sport (UK)	Case study	11 projects	A passive 'open access' approach was found to be inadequate in fostering social inclusion - it also needs dedicated human resources to overcome significant barriers to participation. Providing opportunities of itself is not enough.
Schulenkorf & Edwards (2012) (Econlit)	Sport (Sri Lanka)	Programme evaluation	2 focus groups; 35 interviews	Evaluates the impact of events in facilitating social development between disparate communities in a developing country. Five sets of recommendations emerge to fulfil the potential for social development: concentrating on youth as catalysts for change; ethnically mixed team sports; combining large-scale events with regular sports programmes and exchanges; providing event-related social opportunities; and leveraging from events to generate additional political, educational, promotional and financial benefits.
Bailey (2005) (CASE)	PE and Sport (UK)	Narrative review		Some favourable findings in studies but a problem of widespread failure to evaluate programmes.
Coalter & Allison (1996) Not in databases	Sport (UK)	Narrative review		Identify several community development initiatives focussed on provision of sporting opportunities. Key principles underlying community development through sport are citizenship (equal rights), equity (equal benefits), control (social integration), health and economics (jobs).

Lullo & Van Puymbroeck (2006) (BH)	Sport (USA)	Narrative review	ADHD young people	Sport can increase integration into social settings and help improve peer relations, thus increasing a child's happiness and self-confidence.
Sport England (2008b) Not in databases	Sport (UK)	Narrative review		Sport can contribute to sustainable and cohesive communities through its impacts on local pride, volunteering, shared identities; and through built sports facilities, social enterprises and businesses in sport

Table A7.5 Summary of Sport/Exercise and Education

Authors (sources)	Sport/exercise & country	Study type in evidence hierarchy	Sample	Findings
Centers for Disease Control and Prevention (2010) (BH)	Physical Activity (USA)	Systematic review	50 studies, reported in 43 papers	The studies were of the relationships between physical activity and one or more of cognitive skills and attitudes (31 studies), academic behaviour (16 studies), and academic achievements (32 studies). 19 studies related to extracurricular physical activity; 14 to PE classes. 64% of the studies were interventions; 76% were longitudinal. 251 associations were identified, of which half were positive, 48% not significant and 1.5% negative.
Newman et al. (2010) (CASE)	Sport (UK)	Systematic review	6 studies on sport and learning outcomes	Two studies indicated that students who played organised sport achieved higher numeracy levels than those who did not play organised sport. One study indicated that students doing bespoke extra-curricular activities related to a sports setting improved their educational attainment in numeracy, and also their IT skills and independent study skills. However, the importance of the sport setting, as the original incentive, is not identified - e.g. in comparison with alternative settings.
Davis <i>et al.</i> (2011) (BH)	Exercise (USA)	Randomised control trial (RCT)	171 overweight children	Exercise improved executive cognitive skills, mathematics scores
Broh (2002) (CASE)	Sport (USA)	Cohort study	12,578 students	Participation in inter-school sport has small but consistent benefits for student English and Maths grades. It also has a positive effect on self-esteem, locus of control, homework time, social ties between students, parents, and school.
Eitle & Eitle (2002) (CASE)	Sport (USA)	Cohort study	5,018	Whereas participating in basketball and football provides social capital for those with cultural disadvantage, this does not translate into higher educational attainment - participation in the two sports has a negative relationship with attainment scores. Playing other sports is associated with higher grades for whites but lower grades for blacks.

Lipscomb (2007) (CASE)	Sports (USA)	Cohort study	16, 305 students	Sports participation is associated with a 2% increase in maths and science test scores, and (same as non-sport clubs participation) a 5% increase in Bachelors degree attainment expectations.
Mackin & Walther (2011) (Physical Education Index)	Sport (USA)	Cohort study	2,000 students in 7 th -12 th grades, and then aged 25-34	Sports participation increases white and African American men's years of education, but has no significant effect on Hispanic men's years of education. High sport participation increases the probability of African American and white males earning a college degree; and low sport participation increases the probability of an Hispanic or white male earning a college degree, compared with those who do not participate in sport.
Marsh & Kleitman (2003) (CASE)	Sport (USA)	Cohort study	4,250 students	Participation in sport was positively associated with 13/21 outcomes, including higher grades, higher self-esteem, more time on homework, and higher educational aspirations. Results for extramural sports were significantly more favourable than for intramural sports, for grades, homework time, educational aspirations and subsequent university attainments. Results for team sports were also favourable.
Rees & Sabia (2010) (CASE)	Sport (USA)	Cohort study	20,746 adolescents	Sports participation is positively associated with GPAs, college aspirations and less problems completing homework, using one statistical test (OLS) but adjusting for fixed effects eliminates most of these benefits - college aspirations are the only benefits that remain.
Yin & Moore (2004) (CASE)	Sport (USA)	Cohort study	1,833 students	Inter-school sport was associated with lower drop out for boys and girls and higher locus of control and self-esteem, although the latter effects did not endure to later adolescence.
Zeiser (2011) (CASE)	football and basketball (USA)	Cohort study	660-3580 students	Participation in varsity football negatively affects GPAs of black male students, but not white. Participation in varsity basketball positively affects GPAs of white female students, but not black.
Marvul (2012) (CASE)	Sports (USA)	Case-control study	40 students	Absenteeism, negatively affected by a five month programme which included sports participation; mediated by better attitude towards education, educational expectations, and emotional, cognitive and behavioural engagement.

McClendon et al. (2000) (CASE)	Sport (USA)	Case-control study	900 students	Project participants achieved higher GPAs than a comparison group.
Blomfield & Barber (2010) (CASE)	Sports (Australia)	Cross- sectional study	98 students	Extracurricular participation positively associated with higher academic track enrolment, university aspirations and school belonging; but negatively associated with absenteeism.
Cathey (2008) (CASE)	Sports (USA)	Cross- sectional study	1,227 students	Statistically significant difference for Reading, Maths and Science scores between athletes and non-athletes, in favour of the former.
Fox <i>et al.</i> (2010) (CASE)	Sports (USA)	Cross- sectional study	4,746 students	For high school girls, physical activity and sports team participation are positively associated with higher GPA; for boys only sports team participation is positively associated with higher GPA.
Gao <i>et al.</i> (2011) (BH)	Sport (USA)	Cross- sectional study	80,064 students	Significant positive linear relationship between students' fitness levels and academic achievement, after controlling for gender, race, socioeconomic class and school district. Also, a significant negative relationship between fitness and suspensions and a significant positive relationship between fitness and student attendances.
Hawkins & Mulkey (2005) (CASE)	Sport (USA)	Cross- sectional study	1,105 students	Sports participation is positively associated with black male and female students' college aspirations, the effects for black female students being more influenced by intramural sports. Also, positive links between sports participation and proacademic attitudes, such as for males lower social misconduct, and less likely to be judged by teachers as not giving full effort; and for females less likely to miss classes, and more likely to look forward to core curriculum classes. As well as intrinsic motivations, the requirement for a minimum academic attainment in order to participate in intramural and inter-school sport is a positive incentive. Furthermore, the close relationships with sports coaches facilitate close support and monitoring of academic resilience.

Kim and So (2012) (Econlit & PE Index)	PE (Korea)	Cross- sectional study	75,066 adolescent students	After adjusting for covariate, mediating variables, students attending three or more PE classes a week are associated with better school performance compared with students attending less than three PE classes a week.
Kline (1997) (CASE)	Sports (USA)	Cross- sectional study	483 College students	Positive association between sports participation and four measures of education attainment, but not with GPA.
Metzger et al. (2009) (CASE)	Sports (USA)	Cross- sectional study	2,495 young people	Positive association between sports participation alone and GPA, compared with the total group, but more mixed results for sports with other activities.
Morris & Kalil (2004) (BH)	Sport (Canada)	Cross- sectional study	2,127 children	Children participating in a combination of out of school activities - sport, lessons and clubs - scored higher in school achievement and pro-social behaviour. Similar benefits, though not as large, occurred for sports and clubs, and for sports alone. Sport is the common factor in achieving benefits.
Pirrie and Lodewyk (2012) (PsycInfo)	PE (Canada)	Cross- sectional study	40 4 th grade students	Evidence that moderate-to-vigorous physical activity improves planning cognitive process, including problem solving and behaviour regulation.
Streb (2009) (CASE)	Sports (USA)	Cross- sectional study	492 students	Correlation between co-curricular activities and academic performance, but lower for sports than for performing arts or service/leadership clubs.
Southall et al. (2013) Not in databases	Sport (USA)	Cross- sectional study		All 30 NCAA Division I men's basketball conferences have negative Adjusted Graduation Gaps, meaning all men's basketball player graduation rates are less than the estimated full-time male student body rate. The gap is higher for black players than white. A smaller gap is also evident for female players

Martin (2010)	Sport	Narrative	10 intervention	Significant positive associations between children's sport participation and
(BH)	(International)	review	studies; 18 cross section	academic achievement.
			studies; 6	
			narrative	
			reviews	

Table A7.6 Summary of Sport/Exercise and Multiple Impacts

Authors (sources)	Sport/ exercise & country	Study type in evidence hierarchy	Sample	Findings
Vail (2005) (BH)	Sport (Canada)	Systematic review		Key findings for education show benefits of incorporating PE curriculum and extra- curricular sport team involvement for health, academic performance and adjustment in later life. Key findings for health show many positive health benefits from sports participation, ranging from reduction of chronic disease risk to general improvement in the quality and longevity of life.
Goldfield et al. (2012) (BH)	Sport (Canada)	Randomised control trial	30 obese adolescents	Exercise significantly improved body image, perceived scholastic competence, and social competence, via improved aerobic fitness, not changes in body composition.
Fredricks (2006) (CASE)	Sports (USA)	Cohort study	1,500 families from the Maryland adolescent development in context study	Participation in school sport and clubs was positively associated with academic and psychological adjustment and negatively associated with drug and alcohol use; and also positively associated with educational status and civic engagement one year after leaving high school.
Rizzuto <i>et al.</i> (2012) (BH)	Exercise (Sweden)	Cohort study	1,810 adults over 18 years	Of leisure activities associated with survival post 75 years of age, physical activity is the most strongly associated.
Feinstein et al. (2005) (CASE)	Sport (UK)	Cohort study	British Cohort Study - 11,261 adult respondents from people born in 1970	Participation in sport at the age of 16 is associated with several positive adult outcomes, including lower adult smoking, less depression, fewer of the status 'single, separated or divorced', fewer in temporary or social housing, homeless or victims of crime, higher educational achievement, and fewer on low incomes or living in a workless household. Sport and community centre activity 'is quite distinctive in largely attracting young people independently of their socio-economic background. Consequently, sport and community centre activities might well be playing a role in ameliorating the long-term effects of poor family background.

Zabriskie et al. (2005) (BH)	Sport (USA)	Time series study	129 disabled people	Sport participation positively influences QOL, overall health, quality of family life and quality of social life.
Bloom <i>et al.</i> (2005) (BH)	Sport (Canada)	Cross- sectional study	2,006 adults	Respondent ranked different benefits in the following descending order: improved physical fitness and health; fun, recreation and relaxation; enhanced sense of achievement; more opportunities for shared family and household activities; improved social, analytical and life skills; opportunities to socialise and make new friends; and preparedness for sport competitions.
Huhtala (2004) (BH)	Outdoor recreation (Finland)	Cross- sectional study	1,871 respondents	Uses a contingent valuation study to value outdoor recreation. A significant minority of respondents (28-41%, depending on the method) had a zero willingness to pay explicitly for outdoor recreation. The average willingness to pay was €19 per year per person, which aggregates to a total willingness to pay of €75 million per year, which compares favourably with €13 million maintenance costs per year.
Humphreys et al. (2011) (BH)	Sport (Canada)	Cross- sectional study	1,660 adults	Using a contingent valuation method, Canadian's willingness to pay for success by Team Canada in the 2010 Vancouver Winter Olympic Games was estimated to be between \$315 million and \$3.268 billion, or between three to eight times the cost of the Games.
Miller <i>et al.</i> (2000) (CASE)	Sport (USA)	Cross- sectional study	16,262 high school students	Sports participation negatively associated with cigarette smoking, illicit drug use and suicide risk; no relationship regarding use of anabolic steroids and only highly involved athletes were more likely to binge drink. Female athletes had more positive body images than non-athletes.
Wilson <i>et al.</i> (2010) (CASE)	Sport (USA)	Cross- sectional study	447 middle school students	Those who chose basketball and American football were more likely to be at risk and report more negative experiences - i.e. the selection issue.
Grieve & Sherry (2012) (BH)	Sport (Australia)	Case study	54 interviews	A new centre provides an extensive range of noneconomic benefits such as increased community visibility, enhanced community image and a range of social/psychic benefits.

Hodgson et al. (2011) (BH)	Exercise (UK)	Case study	17 interviews	An exercise programme for people with severe and enduring mental illness has benefits to mental wellbeing, physical health and social opportunities
Burnett (2001) (CASE)	Sport (South Africa)	Case study	Mixed methods	Households identified the social impact of sport - i.e. behavioural and health benefits, social skills, reduced crime. Teachers valued the individual and social empowerment afforded through sport, as well as the inclusivity of the programme. Another valued benefit was the reduced social distance between teachers and students.
Burnett (2011) (CASE)	Sport (South Africa)	Case study	Mixed methods	Positive impacts on status and employability of the programme's volunteer peer leaders.
Kay (2009) (CASE)	Sport (India)	Case study	38 interviews	Indications of participants' increased knowledge and empowerment, via self-confidence.
Cadilhac et al. (2011) (BH)	Inactivity (Australia)	Economic evaluation		Estimated the effects of a 10% feasible reduction in physical inactivity from the current 70% level on health, deaths, disability, working days and home based production. The savings estimate is - AUD 162 million.
ACTSport (2004) (CASE)	Sport (Australia)	Narrative review		Reviews evidence including sport and some social benefits: health, social coherence and crime, personal wellbeing and self-esteem.
Bailey (2005) (CASE)	Sport and PE (UK)	Narrative review		Reviews evidence of effects on social inclusion and social capital and finds evidence supporting effects on physical and mental health, but a need for more evidence on cognitive and academic development, crime reduction, truancy and disaffection.
Bailey (2006) (CASE)	Sport and PE (UK)	Narrative review		Reviews effects on children's development, including physical, lifestyle, affective, social and cognitive development. Suggests that many of the benefits are not from

			participation per se, but instead mediated by relationships between student and teachers, parents and coaches.
Bailey (2009) (CASE)	Sport and PE (UK)	Narrative review	Reviews effects on children's development, particularly physical, social, affective, and cognitive development. Suggests that many of the benefits are not from participation direct, but instead mediated by contextual and pedagogic variables.
BUPA (2011) (BH)	Healthier lifestyles (UK)	Narrative review	If healthier lifestyles were adopted, the total savings for individuals would sum to £22 billion, out of total annual savings of £33 billion.
Chapin (2002) (BH)	Sports facilities (USA)	Narrative review	Identifies four types of non-economic benefits: social/psychic values to the community; image, particularly from major sports teams; political, e.g. in relation to regeneration; and development, relating to physical redevelopment.
Coalter (2005) (BH)	Sport (UK)	Narrative review	Identifies the following social benefits: health; education; community development, i.e. social capital and active citizenship; and youth crime.
Coalter (2007) Not in databases		Narrative review	Reviews sport and social impacts, including social regeneration and active citizenship, development internationally, education, and crime prevention.
Cox (2012) Sport & Recreation Alliance	Sport and physical activity (UK)	Narrative review	Reviews a range of social and economic benefits and identifies the potential monetary value of realising the benefits.
Not in databases			

Edmonton Sport Council (2010) (BH)	Sport (Canada)	Narrative review	Mainly reports health benefits - NB Direct health care costs of physical inactivity are \$2.1 billion and approx. 25% of health care costs of diseases are linked to physical inactivity. Details effects on mortality, cardiovascular disease, diabetes, cancer, asthma, osteoporosis. Beneficial effects on special populations, children and young people, including academic and social benefits. Other benefits include preventative and social capital.
Colin Higgs Consulting (2008) (BH)	Sport (Canada)	Narrative review	Comprehensive list of potential benefits from sports participation to the individual, the community and the Province. Estimates of the monetary value of the return from investments in sport, including health, personal growth, community regeneration, community safety and environmental improvement.
Home Office (2005) (CASE)	Sport and exercise (UK)	Narrative review	Second year impact report on a programme for at-risk youth, but covering a range of outcomes, including improved social relations with family, peers, etc., improved attendance and achievements in school, and training and awards achieved.
Mulholland (2008) (BH)	Sport (Canada)	Narrative review	Identifies a range of benefits, with detailed chapters reviewing the evidence on each.
Muller et al. (2010) (BH)	Sport (Australia)	Narrative review	Estimates the value of sport benefits to Tasmania to be AUD 5.6 billion, with a return of over \$4 value for every \$1 invested by the whole community. This estimate includes health cost savings and volunteering as well as economic benefits.
Oughton and Tacon (2007) Not in databases	Sport (UK)	Narrative review	Summarises research evidence of sport's effects on health and physical fitness, crime reduction and community safety, social capacity and cohesion, education and lifelong learning, and economic impact and regeneration of local communities.
Ruiz (2004) (BH)	Sport and culture (UK)	Narrative review	Reviews a range of social and community benefits, including new skills, informal and formal learning, increased self-confidence, self-esteem and a feeling of self-worth, social networks, enhanced QOL, social cohesion, personal and community empowerment, improved personal and local image, identity and a sense of wellbeing - with special advantages for the young, ethnic minorities and the

				disabled. Also reduced propensity to offend from programmes targeted at at-risk youth, plus health and education benefits. Identifies gaps in the evidence base, e.g. lack of longitudinal studies.
Sabo <i>et al.</i> (2004) (BH)	Sport (USA)	Narrative review	Females	Cites evidence of positive effects of sport and exercise on a variety of social impacts, including breast cancer, smoking, illicit drug use, sexual risk, depression, suicide and educational gains.
Schwarzeneg ger et al. (2005) Not in databases	Outdoor recreation (USA)	Narrative review		Reviews the benefits that parks and recreation have on physical, mental and social health of individuals and their communities - including reducing obesity, boosting immune systems, diminish risk of disease and increase life expectancy; relieving stress, reducing depression, improving self-esteem and personal growth; strengthening communities, promoting social bonds and supporting youth, leading to safer, cleaner neighbourhoods, volunteerism, stewardship and a livelier community atmosphere.
Seefeldt and Ewing (1997) (CASE)	Sport (USA)	Narrative review		Summarises constraints to sport participation and benefits of youth participation, including to health, social and moral development.
Sport England (2008a) Not in databases	Sport (UK)	Narrative review		Summarises the beneficial effects of sports participation on young people's life chances - via effects on resilience, confidence, health, achievement, etc and hence improving likely later life outcomes for young participants.
Sport England (2008b) Not in databases	Sport (UK)	Narrative review		Summarises community benefits from sport - including developing strong and sustainable communities; improving health and reducing health inequalities; improving life chances of young people; reducing anti-social behaviour and fear of crime; and increasing skills, employment and economic prosperity.

Totten (2007) (BH)	Recreation (Canada)	Narrative review		Identifies psycho-social benefits; enhanced academic, social and interpersonal competencies; reduced risky behaviour, isolation and mental health problems; and reduced youth crime, and health and social care costs. Includes reference to estimates of the monetary value of the return from investments in sport intervention programmes.
VanSickle (2012) (Econlit)	Sport (USA)	Narrative review	women	This reviews evidence of the impact of sport and PE on gender equality and empowerment of women and girls, including health benefits and employment opportunities.

Appendix 8: Literature summaries for Social Impacts of the Arts

Introduction

Each of the tables in Appendix 8 are structured in order of the hierarchy of evidence (see Table 2.3 in main report). For example, Table A8.1 begins with one systematic review, followed by one randomised controlled trial study, followed by one cohort study etc. The type of study is indicated in the third column. Within each category the references are listed alphabetically.

Table A8.1 Summary of Arts and Health

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Clift, Hancox, Staricoff & Whitmore (2008)	Music (UK)	Systematic review	54 non-clinical reports, 1960 to 2008	Given the fact that group singing can be a powerful and moving experience, and given the possibility that singing could contribute to QOL, wellbeing and even health – it is remarkable that so little research has explored these issues, and disappointing that the research undertaken to date is so limited and so variable in character. A collaborative and progressive programme of work embracing conceptual clarification / theory building and empirical research is needed to develop knowledge on this issue.
Staricoff, R.L. (2004)	Arts (UK)	Systematic review	385 papers from 6 databases, 1990-2004	Studies conducted on nonclinical populations have shown the relationship between arts participation and a reduction in their levels of blood pressure and hormonal benefits, compared to a similar group of people not attending cultural events. There is also extensive literature on the effects of the arts, mainly music, for in-patients and for those attending out-patient departments. Art interventions provide support for both the patient and the mental health professional, and create new

				approaches to aid the diagnosis and treatment of mental health disorders.
Clift, Skingley, Coulton & Rodriguez (2011)	Music (UK)	Randomised Controlled Trial	293 participants, 2010	Measures of health were consistently higher among the singing group following the singing programme than among the non-singing group. Three months after the singing groups stopped the participants continued to be higher on measures of health. Participants in the singing groups reported social, emotional and physical health benefits from taking part. Singing groups for older people are likely to be cost-effective as a health promotion strategy.
Kouvonen <i>et al.</i> (2012)	Arts (England)	Cohort study	4,280	Participation in some activities, including arts and music groups, was associated with maintaining waist size only in men whose waist size was in the recommended range at baseline.
Parbery-Clarke Anderson, Hittner & Krauss (2012)	Arts (UK)	Case-control	87 participants	Aging disrupts neural timing, reducing the nervous system's ability to precisely encode sound. The study explores music training as a tool to offset the negative impact of aging on neural processing. By comparing auditory brainstem timing in younger and older musicians and non-musicians to a consonant-vowel speech sound /da/, the report shows that musical experience counteracts age-related delays in subcortical response timing to the formant transition reveals the biologically powerful impact of music on the aging nervous system.
Renton, Phillips, Daykin, Yua, Taylor & Petticrew (2012)	Arts (UK)	Cross-sectional study	Well London survey, 2008	This study suggests that arts and cultural activities are independently associated with health behaviours and mental wellbeing. Further qualitative and prospective intervention studies are needed to elucidate the nature of the relationship between health behaviours, mental wellbeing and arts participation. If arts activities are to be recommended for health improvement, social inequalities in access to arts and cultural activities must be addressed in order to prevent further

				reinforcement of health inequalities.
Secker (2007)	Arts (UK)	Cross-sectional study	230 arts and mental health projects surveyed, two projects analysed in-depth, 88 participants from arts and mental health projects for questionnaires, 34 individuals interviewed for case studies	Significant improvements were found in empowerment, mental health and social inclusion, as well as a significant decrease in the proportion of participants identified as frequent or regular service users. To the extent that improvements could be attributed to arts participation, the greater improvement in empowerment and mental health amongst people with poorer mental health at baseline indicates that arts projects can benefit people with a range of mental health needs, including those with significant mental health difficulties. However, there is no 'model' to be used for arts provision for people with mental health needs.
Beesley, White, Alston, Sweetapple & Pollack (2011)	Arts (Australia)	Qualitative study	16 participants from 43 to 81 years, 2010-2011	The implementation of an arts health programme after stroke made a substantial impact on wellbeing and QOL. Participants experienced improved confidence, self-efficacy, QOL and community participation through involvement in an arts health programme. This study also highlighted the need for community resources to address community re-integration and service provision in the form of age appropriate, activity-based groups for stroke survivors.
Bradt, Magee, Dileo, Wheeler, McGilloway (2010)	Music, UK	Qualitative study	7 studies (184 participants)	The results suggest that rhythmic auditory stimulation (RAS) may be beneficial for improving gait parameters in stroke patients, including gait velocity, cadence, stride length and gait symmetry. These results are encouraging, but more RCTs are needed before recommendations can be made for clinical practice. More research is needed to examine the effects of music therapy on other outcomes in people with ABI.

Devlin (2010)	Arts (UK)	Qualitative study	17 participants (incl. 4 experts)	The arts and crafts can and do contribute to both health and wellbeing and that they create healthy and vibrant individuals and, consequently, healthy and vibrant communities. Additionally, that the arts and crafts are often used to improve the recovery rates and comfort of people with medical conditions as well as improving recovery times for people who are unwell.
Cayton (2007)	Arts (UK)	Narrative review		From a substantial evidence base, it is clear that arts and health initiatives are delivering real and measurable benefits across a wide range of priority areas for health, and can enable the Department and NHS to contribute to key wider Government initiatives, including regeneration of deprived areas, creating greater social capital and community cohesion, enabling greater participation and reducing exclusion, helping people back into employment, and supporting major programmes such as "Every Child Matters" and local area agreements in local government.
Cooley (2003)	Arts (Canada)	Narrative review		The results of this preliminary research into the relationship between arts and culture and health clearly demonstrate there is a very high probability that increasing levels of investment and activity in Canadian arts and culture can have significant and far reaching positive impacts on the health of Canadians and thus on the demands on our national health care system.

Table A8.2 Summary of Arts and Wellbeing

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Kouvonen <i>et al.</i> (2012)	Arts (England)	Cohort Study	4,280	34 – 53% improvement in overall social awareness and benefit of those who participate in the arts within Leisure Time Activities.
Bash (2006)	Arts (USA)	Cross-sectional study	Ten communities with population from 1,000 to 6,000 residents	The report analyses why Tracy, Minnesota is such an active centre for arts and culture. The study underlines the importance of leadership: in Tracy, there is leadership that understands and values a deeply rooted yet always evolving sense of place. There is leadership that knows the importance of creating opportunities for its citizens to sit out on the front porch together and gather as a community to celebrate. There is leadership that with pride looks to the future, attends city meetings and has a vision for the community as a whole, no matter what the costs might be.
Grossi (2012)	Arts (Italy)	Cross-sectional study	1,500 Italian citizens	The results show that, among the various potential factors considered, cultural access unexpectedly ranks as the second most important determinant of psychological wellbeing, immediately after the absence or presence of diseases, and outperforming factors such as job, age, income, civil status, education, place of living and other important factors.
Michalos & Kahlke (2008)	Arts (USA)	Cross-sectional study	1,027 participants	The study shows that arts-related activities and their corresponding satisfaction contributed relatively little to the perceived QOL of participants. While this may seem incredible (especially to arts enthusiasts), it is important to keep in mind the initial condition "in the context of all our predictors" and the qualifier "relatively". The inability

				of researchers to discover greater marginal or total impacts of arts- related activities on the perceived QOL may be the result of their use of the wrong search instruments for the great variety of values involved. It is an open question whether they used the best tools and found as much as there was to find or whether better tools would have found more.
Michalos & Kahlke (2010)	Arts (USA)	Cross-sectional study	1,027 participants	Different results were found in the province-wide versus the five-communities surveys for the following. Compared to all seven life assessment measures, for the province, satisfaction with the quality of life and happiness had the largest number of significant correlations with arts-related activities measured in "hours per week" engaged, while for the five communities, the single measure of satisfaction with the quality of life had the largest number of significant correlations.
Regional Arts Australia (2010)	Arts (Australia)	Cross-sectional study	Over 85,00 people across Australia	As a result of the consultation, Regional Arts Australia has identified five key priority areas for the next five years: building a strong sense of purpose and identity, developing inclusive and resilient communities, engaging young people in creating regional futures, health and wellbeing, environmental sustainability.
Kilroy, Garner, Parkinson, Kagan & Senior (2007)	Arts (UK)	Case study	6 projects, 2003- 2006	This evaluation has shown that it is through combining a holistic and person centred approach with a positive and supportive enviro-culture that the potential for transformative change is enhanced. Arts acting as a catalyst within the 'considered' environment offer the opportunity to enter into 'flow' states where there is a perceived relief from negative thinking and unhealthy patterns of behaviour. This alongside enhanced relationships and new skill development can raise expectations and open new possibilities, encouraging perceived wellbeing from which transformative change can arise.

Hampshire & Matthijsse (2010)	Arts (UK	Programme evaluation	UK Government- funded SingUp programme for children, 2008- 2009	While arts projects can impact positively on young people's social and emotional wellbeing, we cannot assume that the changes will be unequivocally good or straightforward. We follow Bourdieu and other critical theorists in arguing that social capital operates in association with economic and cultural capital, and cannot be understood in isolation from the wider constraints of people's lives.
Devlin (2010)	Arts (UK)	Qualitative study	17 participants (incl. 4 experts)	The arts and crafts can and do contribute to both health and wellbeing and that they create healthy and vibrant individuals and, consequently, healthy and vibrant communities. Additionally, that the arts and crafts are often used to improve the recovery rates and comfort of people with medical conditions as well as improving recovery times for people who are unwell.
Galloway, Bell, Hamilton & Scullion (2006)	Arts (UK)	Narrative review	2006	The review flags up the paucity of empirical research in this area, and the need to fund well-designed, large scale research to explore and test the impact of culture and sport on QOL. The absence of research creates a theoretical vacuum, which poses a problem for developing indicators or demonstrating causality. This is a key concern for public policy, as <i>causality lies at the heart of policy making</i> .

Table A8.3 Summary of Arts & Crime

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Catterall et al. (2012)	Arts (USA)	Time series study	1988- 2000 24,599 8 th grade US Students; 1997 8,984 12- 16yr US students; 1998- 1999 22,666 US Kindergarten students; 2002- 2006 15,361 US 10 th grade students	more positive outcomes in a variety of areas than their low-arts-engaged peers; at-risk teenagers or young adults with a history of intensive arts experiences show achievement levels closer to, and in some cases exceeding, the levels shown by the general population studied; and most of the positive relationships between arts involvement and academic outcomes apply only to at-risk populations (low-SES). But positive relationships between arts and
The Nottingham Trent University and Ecotec Research and Consulting (2005)	Arts (UK)	Cohort study	756 young people and 49 education, and arts and YOT practitioners, 2002-2003	Participating in the arts help socially excluded young people and young people on Detention and Training Orders (DTOs) develop soft skills (such as communication skills and team-working) and bring improvement in overall educational achievement. However, barriers still hinder the development of arts provision in DTOs, such as scarce financial resources, insufficient adequate space, shortage of trained staff, and lack of interest from managers. Other barriers included low self-esteem and low confidence among young people in custody as well as difficulties caused by group dynamics.

Eastburn (2003)	Music (UK)	Case study	124 prisoners in 5 prisons, 2003	Gamelan playing helps enhance prisoners' self-esteem and helps them develop certain basic and key skills including communication, listening, team-working, numeracy, problem-solving, concentration and motor skills.
Johnson <i>et al.</i> (2011)	Arts (UK)	Case study	3 charities, 2010	Using three charity case studies, the report explores the costs and benefits of using the arts to help rehabilitate people who have offended or are at risk of offending. It shows how the three charities both provide savings to the public purse and improve the life chances of offenders.
Van Dijk (2012)	Arts (Netherlands)	Case study	PEETA project	This thesis discusses the possibilities of the SEPE certificate for helping inmates reintegrate in society upon release. This certificate can be achieved through participating in an arts project and shows the employee skills of the participant. This certificate could be useful for reintegration, but will not be a simple solution for recidivism, due to emotional instability and social factors that might play a role in the prisoner's life. The Dutch PEETA project Rob in da Hood is taken as a case study for this thesis.
Arts Alliance (2010)	Arts (UK)	Narrative review	Arts Alliance activities and programmes	Overview of the activity of Arts Alliance. The brochure offers a snapshot of the huge variety of arts initiatives taking place in the Criminal Justice System, together with findings from research and the experiences of participants and staff who know the benefits that art offers offenders in their rehabilitation.
Balfour (2004)	Theatre (UK)	Narrative review	13 essays	Theatre in Prison is a collection of 13 international essays exploring the rich diversity of innovative drama works in prisons. It contextualises the prison theatre field. Leading practitioners and academics explore key aspects of practice where arts interact with

			prison, and how the outcomes create social benefits.
Hughes (2006)	Arts (UK)	Narrative review	Through surveys, case studies and more, the review demonstrate that "the arts have the capacity and potential to offer a range of innovative, theory-informed and practical approaches that calenhance and extend provision of educational, developmental and therapeutic programmes across the criminal justice sector.

Table A8.4 Summary of Arts and Social Capital

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Elsley & McMellon (2010)	Arts, culture, science (UK)	Systematic review	2010	Research shows that the variables which influence participation and engagement in both childhood and adulthood include family support and interest, socio economic circumstances and frequency of engagement with activities. However, more research is needed to assess the impact of childhood and adulthood exposure to culture and science: there is little longitudinal research in these areas, and the influence of digital media and traditional media remained underresearched.
Benediktsson (2012)	Arts (USA)	Cohort study		The results suggest that religiosity, political activism, high arts participation, and athletic activities undertaken prior to college affect the diversity of social networks formed in the first year, but work in different directions. The effects of these cultural experiences may be explained by the racial organization of cultural activity on campus.
de Haan (2000)	Arts (Netherlands)	Time-series study	1975-1995	This study investigates the interest in the performing and visual arts. For each form of participation, the study looks at the trend in interest between the 1970s and the middle of the 1990s. It also maps out the extent to which the profile of those with an interest has changed, and explores the background to the various developments.
Kouvonen, et al. (2012)	Arts (UK)	Cohort study	4,280 older adults from the English Longitudinal Study	Participation in education, arts, music groups, evening classes, and in charitable associations may help in maintaining a recommended level of waist size in older men originally in the recommended range.

			of Ageing	
Rabaglietti, Roggero, Begotti, Borca & Ciairano (2012)	Arts (Italy)	Cohort study	175 Italian late adolescent, 2011	The study demonstrated that the family can still make a significant contribution to the socialization of young people by promoting their learning of socially accepted values. In addition, the study underlined the relevance of investigating social capital represented by youths' promotion of their social and civil adjustment and further development. Such social capital is produced through relationships with family members as well as through relationships with others in the organizations and the community.
Stern & Seifert (2010)	Arts (USA)	Time-series study	Philadelphia metropolitan area	The article demonstrates the association between the concentration of cultural assets in Philadelphia in 1997 with improved housing market conditions between 2001 and 2006.
Griffin, Kim, So & Hsu (2009)	Theatre (USA)	Case-control	954 students, 2006-2007	The results support that a well-designed, theatre-based education can improve student engagement; and that it may have academic benefits in language arts content, particularly for those students who are struggling with English proficiency.
Parbery-Clarke Anderson, Hittner & Krauss (2012)	Arts (UK)	Case-control	87 participants	Aging disrupts neural timing, reducing the nervous system's ability to precisely encode sound. The study explores music training as a tool to offset the negative impact of aging on neural processing. The report shows that musical experience counteracts age-related delays in subcortical response timing, revealing the biologically powerful impact of music on the aging nervous system.
Aydin (2009)	Arts (Turkey)	Cross-sectional study	1994-2004	In summary, the data indicate that leisure and cultural consumption tend to be stratified by educational and income level and, to some extent, white-collar occupation. Second, households with female heads tended to engage more in highbrow consumption, compared to

				households with male heads.
Bash (2006)	Arts (USA)	Cross-sectional study	Ten communities with population from 1,000 to 6,000 residents	The report analyses why Tracy, Minnesota is such an active centre for arts and culture. The study underlines the importance of leadership: in Tracy, there is leadership that understands and values a deeply rooted yet always evolving sense of place. There is leadership that knows the importance of creating opportunities for its citizens to sit out on the front porch together and gather as a community to celebrate. There is leadership that with pride looks to the future, attends city meetings and has a vision for the community as a whole, no matter what the costs.
Bragg, Manchester & Faulkner (2009)	Arts (Australia)	Cross-sectional study	2 schools, 2007- 2009	This exploratory pilot study investigates the extent to which participating in a community cultural development initiative builds social capital among children. Results suggest that program components, such as facilitating friendship connections between children and designing activities that incorporate the sharing of materials, equipment and tools to facilitate reciprocity, should be an important focus for developing arts programs within a social capital framework.
Creative New Zealand (1999)	Arts (New Zealand)	Cross-sectional study	5846 adults aged 18 years and over, 1999	Findings show that 45% of Maori take part in Maori arts activities every year. They also show that 35% of Maori (or 103,800) take part in an average of 3.3 different types of Maori arts activity every month. Maintaining or passing on a tradition is a significant reason for Maori participation in Maori arts activities. In fact, it is the main reason for participating in the language arts.
D'Souza et al. (2011)	Arts (UK)	Cross-sectional study	Taking Part survey 2010-2011	The study found that volunteers feel more able to influence changes to their local cultural and sports facilities and indeed the quality of their local environment more generally, and demonstrates that each sector has a distinct demographic profile which could be used for targeting

				and/or broadening volunteer opportunities.
Gayo-Cal (2006)	Arts (UK)	Cross-sectional study	Various surveys, 2001-2006	The results show some effects, though to a different extent and for different factors, the most important being level of education, age and gender.
Interarts Foundation (2010)	Arts (Europe)	Cross-sectional study	Target: people between 15 and 24 years, with secondary Attention given to children from 12 to 15 and young adults from 24 to 29, 2009	Young people are not a homogeneous group and need differentiated, coordinated and long-term policies for accessing culture, even if the same trends can be observed in most of the countries. Access of young people to culture is attracting a growing interest at all policymaking levels. Money, geographical constraints and time, remain the main obstacles in terms of access of young people to culture. Family and social environment are fundamental elements in encouraging cultural participation. Digitalisation can be used as a motor of cultural participation. Volunteering is an important part of cultural participation.
Le Roux, Rouanet, Savage & Wardle (2007)	Arts (UK)	Cross-sectional study	Data from Cultural Capital and Social Exclusion study	Examining the relationship between social class membership and cultural participation and taste in the areas of music, reading, television and film, visual arts, leisure, and eating out, the study distinguishes a relatively small professional class (24%) from an intermediate class of lower managerial workers, supervisors, the self-employed, senior technicians and white collar workers (32%) and a relatively large working class which includes lower supervisors and technicians (44%).
Marsh, MacKay, Morton, Parry, Bertranou & Sarmah (2010)	Arts (UK)	Cross-sectional study	Model for 38 separate activity types for 33 different cohort groups, 2010	The technical report presents a detailed technical description of the analysis covered in the equivalent summary paper. The analysis presents key background factors that predict engagement. They include: childhood experience of engaging in all types of culture is positively associated with engaging in culture as an adult; levels of education; social economic status; media consumption, which is

				positively associated with engagement in culture and sport.
Mcintyre, MacDonald & Ellaway (2008)	Arts (UK)	Cross-sectional study	Location of 42 resources in Glasgow City, Scotland, by quintile of small area deprivation, 2005–2006	It appears that in the early 21st century, access to resources does not always disadvantage poorer neighbourhoods in the UK. We conclude that we need to ensure that theories and policies are based on up-to-date and context-specific empirical evidence on the distribution of neighbourhood resources, and to engage in further research on interactions between individual and environmental factors in shaping health and health inequalities.
Miringoff & Opdycke (2005)	Arts (USA)	Cross-sectional study	US National Survey, 2002-2005	The report found that Americans value the arts in their own lives and in the lives of their children. Yet participation levels have declined slightly since our last survey, both for adults and for children. Differences in participation by income level also remain a serious problem.
MORI (2005)	Arts (UK)	Cross-sectional study	287 secondary state schools throughout Scotland, 127 output areas selected Scotland's Census Output Areas (OAs), 2003-2005	When asked what 11 - 16 year olds are most likely to do in their spare time, the top 3 activities are watching T.V./Videos/ DVDs (87%), listening to music (87%) and going to friends' houses (84%). Activities they are less likely to become involved in include: going to an art gallery (4%), museum (7%) or attending a religious centre (10%). Youth clubs are largely attended by those aged under 15 and one in eight of 15 - 16 year olds also say they attend youth clubs.
National Endowment for the Arts [NEA] (2009)	Arts (USA)	Cross-sectional study	NEA's periodic Survey of Public Participation in the Arts, 2006-2008	In keeping with previous NEA research, this analysis finds that Americans who attend arts performances, visit art museums or galleries, or read literature are particularly active members of their communities. Although this Note draws conclusions similar to those of previous NEA reports, it examines a wider range of civic and social activities. Besides analysing volunteer rates among arts participants,

				the Note tracks civic activities captured by two new questions in the SPPA: attending community meetings and voting in a presidential election. Also new to the 2008 survey are questions concerning arts attendance at schools and places of worship, as well as questions about taking children to out-of-school arts experiences.
National Statistics (2009)	Arts (UK)	Cross-sectional study	Scottish Household Survey, 2007-2008	Participation in arts and culture has been shown to contribute to individual wellbeing, self-esteem, confidence, new skills, improved mental and physical health and better educational attainment. At a community level, cultural participation can contribute to community cohesion, pride and confidence, reduce social exclusion, enhance a 'sense of place', renew interest in heritage and the environment, and make communities feel safer and stronger. Culture is also related to our sense of national identity and plays an important role in attracting tourists to Scotland to enjoy our cultural facilities, heritage and landscape.
National Endowment for the Arts [NEA] (2010)	Arts (USA)	Cross-sectional study	Survey of Public Participation in the Arts, 2008	Arts participation through media appears to encourage — rather than replace — live arts attendance. There is a strong relationship between media arts participation and live arts attendance, personal arts performance, and arts creation. A sizeable group of Americans — particularly racial/ethnic minorities and older adults — participate in benchmark art forms solely through electronic media. For groups who face economic or geographic barriers to attending arts events, media may provide an alternative way to engage in the arts. Given the relatively high rate of young adults who engage in literature through media, the overall rate of literary participation via media may increase markedly in the future

Novak-Leonard & Brown(2011)	Arts (USA)	Cross-sectional study	Survey of Public Participation in the Arts, 1982-2008	Four key contextual factors emerge from the current literature and research; they are crucial to a more comprehensive understanding of arts participation. These four factors are 1) the skill level of the artist or participant, 2) the form of artistic expression, 3) the setting in which the activity occurs, and 4) the degree to which the individual exercises creative control over the activity.
Ogrodnik (2000)	Arts (Canada)	Cross-sectional study	General Social Survey, Culture Supplements, 1992-1998	The culture sector, like any other, will always be required to structure and plan its services in accordance with the needs and demands of its market. In doing so, critical to its success will be its understanding of key issues and influences which both encourage and restrict participation. Ultimately, the key to the culture sector's strength lies in the participation of ordinary, everyday people.
Scottish Arts Council (2008)	Arts (UK)	Cross-sectional study	4,944 Scottish adults, 2008	The 2008 survey found that 90% of adults living in Scotland had either attended or participated in any arts or cultural activity during the previous 12 months, the same percentage as recorded in 2006 and higher than the 85% recorded in the 2004 survey. More specifically, the 2008 survey found that 77% of the adult population in Scotland had attended one or more arts or cultural activities during the previous 12 months.
Secker (2007)	Arts (UK)	Cross-sectional study	230 arts and mental health projects surveyed, two projects analysed in-depth, 88 participants from arts and mental health projects for	Significant improvements were found in empowerment, mental health and social inclusion, as well as a significant decrease in the proportion of participants identified as frequent or regular service users. To the extent that improvements could be attributed to arts participation, the greater improvement in empowerment and mental health amongst people with poorer mental health at baseline indicates that arts projects can benefit people with a range of mental health needs, including those with significant mental health difficulties. However, there is no 'model'

			questionnaires, 34 individuals interviewed for case studies	to be used for arts provision for people with mental health needs.
Upright (2004)	Arts (USA)	Cross-sectional study	Survey of Public Participation in the Arts, 1992	The importance of social ties is demonstrated by the finding that spouse's background has an impact on an individual's arts participation comparable to one's own characteristics and that this effect persists even net of one's spouse's own attendance. Consistent with theories of a gendered division of cultural labour, men's attendance is more strongly influenced by spousal characteristics than is women's attendance.
Bragg & Manchester (2007)	Arts (UK)	Qualitative study	Five schools, 2009-2010	The report evaluates the nature and impact of Creative Partnerships on school ethos, discussed under the headings considerate, convivial and capacious. Creative Partnerships programmes improve relationships between staff and students, enhance motivation to learn, boost the reputation of the school in the local community. Yet because the schools involved were often located in disadvantaged areas with rapid turnover of students in a transient population, the good work achieved in such respects does not easily translate into increased attainment and risks being undervalued as a result.
Fuller (2009)	Arts (Canada)	Qualitative study	100 organisations and 40 youth participants	In March 2009, the Department of Canadian Heritage held discussions on youth engagement with 100 organizations and 40 youth participants from the Encounters with Canada program. Discussions focused on understanding what models of engagement are in use, what barriers or challenges exist related to youth engagement, how current federal programs support engagement activities, and the role of Canadian Heritage and/or the Government of Canada in supporting and

				encouraging youth engagement.
Grodach (2010)	Arts (USA)	Qualitative study	Art spaces in 4 Texan counties	This study shows that through their programming and other activities, art spaces serve various public space roles related to community development. However, the ability of many to perform as public spaces is hindered by facility design issues and poor physical connections in their surrounding area.
McPherson, Bird, Anderson, Davis & Blair (2009)	Arts (Australia)	Qualitative study	15 people from the community and 8 from residential care, 2008	Participants were engaged from the outset and remained engaged. They became animated, gained confidence and were able to discuss and interact with the art works and the social process. Carers confirmed that many participants remembered the sessions with pleasure and wanted it to continue, but reported no lasting change in participants. Educators spoke mostly about what they had learned, including new ways to present to other clients. Despite no evidence for lasting effects, all involved wanted the programme to continue. The programme is continuing and expanding.
Moody & Phinney (2012)	Arts (USA)	Qualitative study	20 older adults participating in the Arts, Health and Seniors (AHS) Program in Vancouver, 2011	Results indicate that the program supported seniors' capacity to connect to community in new ways by helping them forge connections beyond the seniors centre. Participants also developed a stronger sense of community through collaboration as a group, working together on the arts project towards a final demonstration to the larger community. The results suggest that CEA programs contribute to social inclusion for older people.
Yonas (2009)	Arts (USA)	Qualitative study	22 African- American youth in two urban neighbourhoods	The youth participants identified a range of issues related to community factors, community safety, and violence. Such topics included the role of schools and social networks within the community as safe places and corner stores and abandoned houses as unsafe places.

Adamson, Fyfe & Byrne (2008)	Arts (UK)	Case study		Considerable evidence was found of impact on participants' personal self-development, especially regarding improved self-confidence, higher self-esteem and improved aspirations. However, the report concludes that the connection between arts policy and regeneration policy in Wales is insufficient, that there is a need for a reliable set of indicators of positive social change to establish the value of arts-based interventions, that there are no formal mechanisms to ensure that the benefits of arts activities are built upon and extended beyond the life of specific projects, and that there is limited opportunity for direct employment creation deriving from arts based community practice.
Buys & Miller (2009)	Arts (USA)	Case study	39 primary school children aged 9 to 13 years , 2008	This exploratory research suggests that school-based community cultural development projects offer one way to build social capital in children in five social capital domains measured: self-concept, reciprocity, extended networks, feelings of obligation, feelings of trust and safety.
Carlsen (2007)	Theatre, festival (UK)	Case study	2007	Festivals and events have assumed a prominent place in the social and economic fabric of Edinburgh, to a point where it now enjoys a reputation as a leading festival and event destination. Most of the research and evaluation effort has been concerned with "proving" the economic benefits of individual events. The limitations of focusing on narrow economic outcomes are now widely recognized in terms of the comparability, reliability, and utility of the estimates produced. While the attention of stakeholders has been on economic benefits, the very important cultural, community, and social benefits have been overlooked. Important issues such as engagement with the arts, community, cultural, social, and stakeholder benefits and disbenefits produced have yet to be researched in any systematic way.

Field (2001)	Arts (UK)	Case studies	Asylum seekers and refugees, 2001	Projects were diverse and innovative; projects successfully involved a wide range of participant groups; initiative has empowered refugee artists by allowing them to practice and use their talents and raise their profile; projects have successfully reached large numbers of asylum seekers and refugees. Projects have enabled participants to develop skills, confidence and in some instances, potential to take up education and employment opportunities. Projects have established legacy.
Flinn (2007)	Arts (UK)	Case study	North Glasgow area, 2007	The case study revealed a number of social benefits at both the personal level (e.g. improving communication and social skills, stimulating levels of confidence, widening social [support] networks) and the community level (e.g. community capacity building, empowering the community to undertake collective action, increasing community involvement, integrating migrant groups within the indigenous population).
Leonard (2010)	Music (UK)	Case study	The exhibition <i>The Beat Goes On,</i> National Museums Liverpool, 2008	On the one hand, the case study exhibition sought to reflect the ways in which people engage with and experience popular music. On the other hand, the exhibition was necessarily informed by existing research about how visitors negotiate exhibition content and gallery spaces. Drawing on visitor feedback, gallery observation visits and formal evaluation, the article examined the challenges of effectively communicating concepts and themes around music within an exhibition.
Rosenstein (2010)	Festival (USA)	Case study	7 festivals	As documented by the national survey, outdoor arts festivals increase Americans' access to the arts because they are often free or relatively low-priced. But the case studies reveal that festivals enhance public access in other meaningful ways as well.

Arts Council England (2006)	Arts (UK)	Programme evaluation	Nine young people, aged between 12 and 17, 2006	The findings highlight the positive contribution that drama can have in developing emotional literacy, raising aspirations, building self-esteem and creating an effective bond between key workers and young people. The report also makes a series of recommendations for best practice in arts based projects with young people at risk.
Arts Council England (2009)	Arts (UK)	Programme evaluation	Disabled respondents to the Taking Part survey, 2009	The report monitors the progress made towards achieving disability equality in the arts through our disability equality scheme.
Carpenter (2004)	Arts (UK)	Programme evaluation	6 projects, 2004	The Creative neighbourhoods programme supported six partnership projects in London. The programme was aimed at young people at risk of offending and, in some areas, combating racism.
Garcia (2003)	Arts (UK)	Programme evaluation	28 individuals, 5 experts, two groups of secondary school students and primary school students, media coverage on the programme, eight organisations participating in the programme, 2001- 2002	The efforts made in designing and producing a major cultural and arts programme in the lead up to the Commonwealth Games have resulted in remarkable cultural and arts achievements in Manchester and the North West. Despite the many challenges and limitations, it can be asserted that Cultureshock was a worthwhile endeavour from which valuable lessons can be extracted to inform the creation of a model for cultural events in the area.

Goodlad, Hamilton & Taylor (2002)	Arts (UK)	Programme evaluation	Professionals, general public, organisations part of the Scottish Arts Council's National Lottery Arts and Social Inclusion Scheme, 1999- 2001	An effective funding scheme that is encouraging Social Inclusion Partnerships to use the arts to achieve social inclusion. Participants and SIP employees held very positive views of the outcomes of the arts projects. The study cannot determine long-term benefits at this stage.
Heath, Soep & Roach (1998)	Arts (USA)	Programme evaluation	Participants from youth groups aged 8-20, 1987-1998	This research has found that organisations that centre activities in the arts enable youth who attend their programs regularly to improve their academic standing, increase their abilities in self-assessment and motivation, and raise their sense of the importance of planning and working for a positive future for themselves and their communities.
Hutinger (1998)	Arts (USA)	Programme evaluation	277 children who had disabilities or were at risk, 1997-2000	Findings point to positive benefits of the Expressive Arts Outreach (EA0) project for teachers, children, and families. Staff showed gains in implementing art activities and making adaptations for children with disabilities. Children saw an improvement in their communication skills, social abilities, problem-solving skills, expressive abilities, and motor abilities. Family surveys indicated satisfaction with the project and increased participation in expressive art activities with their children at home.
Johnson, Pfrommer, Stewart, Glinkowski,	Arts (UK)	Programme evaluation	New Audience Programme, 1998- 2003	Audience development is about working towards a more equitable form of cultural participation. The programme yielded many insights into how organisations work, provided many different models for arts and audience development, addressed key barriers for audiences and organisations, and raised issues for longer term sustainable

Fenn, Skelton & Joy (2004)				development.
Long <i>et al.</i> (2002)	Arts (UK)	Programme evaluation	14 projects, 2002	Project evaluation usually generates the feedback necessary for the project's own management purposes and to satisfy funding agencies, who do indeed appear to be impressed with their success. However, there is little effective evaluation against social inclusion outcomes. Hence while milestones are registered, some outputs recorded and levels of satisfaction sometimes assessed, outcomes less often play a part.
Walker, Scott- Melnyk & Sherwood (2002)	Arts (USA)	Programme evaluation	five communities served by three of the community foundations	People participate in arts and culture at much higher rates than have been previously measured when a new, broader definition of participation is used. This is true for people with low incomes and less than college education as well as for groups with more advantages. Frequent participants in arts and culture also tend to be very active in civic, religious, and political activities, and this is true at every income level. Early socialization experiences make a difference in the cultural participation patterns of adults, regardless of income and education.
Bragg (2007)	Arts (UK)	Narrative review	2007	This review introduces readers to the field of consultation work with young people, indicating some relevant references, broad schools of thought, major conceptual issues and practical approaches.
Kinder & Harland (2004)	Arts (UK)	Narrative review	Reports, 1997- 2004	The comparison of two major research strands highlights a number of ways the arts may make a contribution to the social inclusion agenda. Whilst recognising a number of valuable investigations beginning to emerge in this area, nevertheless, it seems there is as yet no high-profile or large-scale research study that provides substantial evidence on this issue.

Lees and Melhuish (2013)	Arts (UK)	Narrative review		Challenges the assumption that arts-led regeneration is a tool to combat social exclusion in inner cities.
Nakagawa (2010)	Arts (Japan)	Narrative review	Cultural policies in Osaka 1999-2008	While carefully investigating cultural policies pursued in the city of Osaka during the 10-year period between 1999 and 2008, the paper tries to elucidate the limits of the old style of urban cultural governance pursued there by detailing the process whereby independent, socially inclusive arts activities developed in Osaka, beginning first by looking at the failures of contemporary arts-focused cultural policies (stage one) and then focusing on the independent efforts of urban citizens to confront and overcome those setbacks (stage two).
National Economic and Social Forum [NESF] (2007)	Arts (Ireland)	Narrative review	Around 300 professionals, 20 organisations, 2006	The arts have many benefits for both individuals and society. However, taking part in the arts in Ireland varies depending on level of education, socio-economic status, the area in which you live, and age.
Quinn (2005)	Festivals (UK)	Narrative review		There has been a remarkable rise in the number of urban arts festivals in recent decades. The outcomes of cities' engagement with arts festivals, however, remains little understood, particularly in social and cultural terms. City authorities tend to disregard the social value of festivals and to construe them simply as vehicles of economic generation or as 'quick fix' solutions to city image problems. While such an approach renders certain benefits, it is ultimately quite limiting. If arts festivals are to achieve their undoubted potential in animating communities, celebrating diversity and improving QOL, then they must be conceived of in a more holistic way by urban managers.
Taylor (2008)	Arts (USA)	Narrative review		Arts and cultural activities are a very important piece of the community development agenda, not only because of their ability to attract an

			audience, and "brand" cities and neighbourhoods as desirable locations, but also because of the way that informal, amateur arts participation makes everyday life in neighbourhoods more valuable to residents by "magnetization" through fun, shared experience, and increased intergenerational contact.
Keaney (2006)	Arts (UK)	Narrative review	Generating social capital and building communities is not easy – patterns of community relations and associational life often have roots in the distant past. Nevertheless, government can make a difference by helping to do three things: promote volunteering, build capacity and encourage and support civic and political participation.

Table A8.5 Summary of Arts & Education

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Newman et al. (2010) (CASE)	Sport (UK)	Systematic review	28 studies on arts participation and learning outcomes	Concludes that evidence suggests arts participation is associated with improved cognitive abilities and transferable skills in young people; higher pre-school and primary school age early literacy skills; and with higher academic attainment for secondary school age students.
Catterall, Dumais & Hampden- Thompson (2012)	Arts (USA)	Cohort study	4 longitudinal studies	This report displays correlations between arts activity among at-risk youth and subsequent levels of academic performance and civic engagement.
Vaughan, Harris & Caldwell (2011)	Arts (Australia)	Cohort study	Approximately 200 schools and 40,000 students across Australia, 2007-2010	The research demonstrates the positive impact of The Song Room's arts-based intervention on improved school attendance, higher academic achievement, as well as enhanced social and emotional wellbeing.
President's Committee on the Arts and Humanities (2011)	Arts, Humanities (USA)	Time-series study	2008-2011	The report demonstrates how integral the arts and humanities are to a complete education that gives young people the capacity to innovate and meet the challenges of a global marketplace. Research shows the effect of arts education on student academic achievement and creativity. Schools are improving test scores and fostering their students' competiveness in the workforce by investing in arts education strategies, even in the toughest neighbourhoods.

Griffin, Kim, So & Hsu (2009)	Theatre (USA)	Case-control	954 students, 2006-2007	The results support that a well-designed, theatre-based education can improve student engagement; and that it may have academic benefits, particularly for those students who are struggling with English proficiency.
Ipsos MORI (2009)	Arts (UK)	Cross-sectional study	2,452 parents of children aged up to 19 years old, 2009	Parents associate a number of benefits with their children's participation in cultural activities, and consider it important that their children have access to cultural activities on a regular basis. Three quarters of parents say their child has taken part in a cultural activity in the past twelve months with their school or with their family. Arts and crafts have the highest participation rates, followed by drama and literature. Most commonly-cited barrier acting against more widespread participation in cultural activities is cost, followed by transport.
Randi (2007)	Arts (USA)	Cross-sectional study	4 schools, 2004- 2006	The study shows that students involved in the Learning Through Art Programme gained skills during arts instruction to a core curriculum area. Skills used in deciphering works of art were applied to examination of a scientific image.
Bragg, Manchester & Faulkner (2009)	Arts (Australia)	Case study	2 schools, 2007- 2009	This exploratory pilot study investigates the extent to which participating in a community cultural development initiative builds social capital among children. Results suggest that program components, such as facilitating friendship connections between children and designing activities that incorporate the sharing of materials, equipment and tools to facilitate reciprocity, should be an important focus for developing arts programs within a social capital framework.
Buys & Miller (2009)	Arts (USA)	Case study	39 primary school children aged 9 to 13 years , 2008	This exploratory research suggests that school-based community cultural development projects offer one way to build social capital in children in five social capital domains measured: self-concept, reciprocity, extended networks, feelings of obligation, feelings of trust

				and safety.
Bamford & Glinkowski (2010)	Music (UK)	Programme evaluation	56 schools in 8 local authorities, 2009	The overall results of the impact evaluation indicate that the Wider Opportunities Programme in Music at Key Stage Two is generally of high international standard and receives widespread positive support from pupils, parents, teachers, head teachers and local authorities. Children appeared genuinely happy in most of the lessons and effective lessons were characterised by innovative pedagogy and interesting approaches.
Bragg & Manchester (2007)	Arts (UK)	Programme evaluation	Five schools, 2009-2010	The report evaluates the nature and impact of Creative Partnerships on school ethos, discussed under the headings considerate, convivial and capacious. Creative Partnerships programmes improve relationships between staff and students, enhance motivation to learn, and boost the reputation of the school in the local community. Yet because the schools involved were often located in disadvantaged areas with rapid turnover of students in a transient population, the good work achieved in such respects does not easily translate into increased attainment and risks being undervalued as a result.
Hunter (2005)	Arts (Australia)	Programme evaluation	6 arts and education research projects, 2005	Research findings demonstrate that arts participation can positively impact students' development, particularly if professional support is provided for teachers and collaborative partnerships are established between students, teachers, artists, families and communities.
Hutinger (1998)	Arts (USA)	Programme evaluation	277 children who had disabilities or were at risk, 1997-2000	Findings point to positive benefits of the Expressive Arts Outreach project for teachers, children, and families. Staff showed gains in implementing art activities and making adaptations for children with disabilities. Children saw an improvement in their communication skills, social abilities, problem-solving skills, expressive abilities, and motor abilities. Family surveys indicated satisfaction with the project and

				increased participation in expressive art activities with their children at home.
Piscitelli, Renshaw, Dunn & Hawke (2004)	Arts (Australia)	Programme evaluation	Queensland state school, 2003	Arts education is faring quite well after the curriculum reform. However, the results indicate that there is an inconsistent quality in arts education across State schools, with variations in resources, community involvement, parent participation, curriculum organisation, assessment of student learning and outcomes. Local investment has been critical in realising the vision of local people for arts engagements in their communities.
Bragg (2007)	Arts (UK)	Narrative review	2007	This review introduces readers to the field of consultation work with young people, indicating some relevant references, broad schools of thought, major conceptual issues and practical approaches.
Clark & Button (2011)	Arts (USA)	Narrative review	2008-2009	This paper discusses the application of a sustainability transdisciplinary education model (STEM) examining the three pillars of sustainability (i.e. environmental, economic, and social) through art, science, and community engagement.
Elsley & McMellon (2010)	Arts, culture, science (UK)	Narrative review	2010	Research shows that the variables which influence participation and engagement in both childhood and adulthood include family support and interest, socio economic circumstances and frequency of engagement with activities. However, more research is needed to assess the impact of childhood and adulthood exposure to culture and science: there is little longitudinal research in these areas, and the influence of digital media and traditional media remained underresearched.
Otterbourg	Arts (USA)	Narrative review	2002	This report provides a brief introduction to the role of the arts in after-school programs. It consists of a brief summary of recent research

(2002)		finding	s about both arts a	nd after-so	hool prog	rams,	a description of the
		key el	ements of succes	sful progra	ms and s	some	key examples that
		showo	ase partnerships	between	schools	and	community-based
		organi	ations.				

Table A8.6 Summary of Arts and Multiple Impacts

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Annabel Jackson Associates Ltd (2011)	Arts (UK)	Time-series study	Turning Point Network groups, 2006-2011	Turning Point Network has started to change the relationship between arts organisations and the Arts Council from one of dependent to colleague, a transformation that happened by design in Turning Point Network, where now it is happening across the arts sector by necessity.
Catterall, Dumais & Hampden- Thompson (2012)	Arts (USA)	Cohort study	4 longitudinal studies	This report displays correlations between arts activity among at-risk youth and subsequent levels of academic performance and civic engagement.
Eastburn (2003)	Music (UK)	Cohort study	124 prisoners in 5 prisons, 2003	Gamelan playing helps enhance prisoners' self-esteem and helps them develop certain basic and key skills including communication, listening, team-working, numeracy, problem-solving, concentration and motor skills.
Rabaglietti, Roggero, Begotti, Borca & Ciairano (2012)	Arts (Italy)	Cohort study	175 Italian late adolescent, 2011	The study demonstrated that the family can still make a significant contribution to the socialization of young people by promoting their learning of socially accepted values. In addition, the study underlined the relevance of investigating social capital represented by youths' promotion of their social and civil adjustment and further development. Such social capital is produced through relationships with family members as well as through relationships with others in the organizations and the community.

Wright, John, Alaggia & Sheel (2006)	Arts (Canada)	Cohort study	183 youths, 9–15 years of age, 2002	The results indicate that high-quality arts programs have a significant effect on children's in-program behaviour and emotional problems. The findings from the qualitative interviews suggest that active recruitment, removing barriers to participation, and high parental involvement enhanced youth engagement. Perceived youth gains included increased confidence, enhanced art skills, improved pro-social skills, and improved conflict resolution skills.
Wright, John, Ellenbogen, Offord, Duku & Rowe (2006)	Arts (Canada)	Cohort study	183 youths, 2002	The results suggest successful recruitment and good retention rates. Multilevel growth curve analyses of observational and behavioural outcomes are presented. Observer ratings showed significant gains in artistic and social skills. Comparisons with matched controls using estimated linear propensity scores revealed a significant reduction in emotional problems for the intervention group. The overall conclusion is that youth from low-income communities benefit from structured arts programs.
Vaughan, Harris & Caldwell (2011)	Arts (Australia)	Cohort study	Approximately 200 schools and 40,000 students across Australia, 2007-2010	The research demonstrates the positive impact of The Song Room's arts-based intervention on improved school attendance, higher academic achievement, as well as enhanced social and emotional wellbeing.
BMRB (2006)	Arts (UK)	Cross-sectional study	Taking Part survey, 2005-2006	Enjoyment was the main reason given for attendance at historic environment sites and arts events and also for participation in arts activities and active sports. Accompanying children was a commonly cited reason for engagement. For all sectors examined, having more free time or being less busy was the main factor given that would encourage more frequent engagement. Lack of interest and poor health were the main reasons given for non-attendance.

Delaney & Keaney (2006)	Arts (UK, Europe)	Cross-sectional study	Various statistical surveys	The results demonstrate substantial correlations between measures of social capital and measures of cultural participation, both at the national level and, within Britain, at the individual level. Further research should examine the use of more detailed statistical methods and programme evaluation techniques to ascertain whether the correlations we observe reflect a causative effect of cultural participation on social capital.
Gayo-Cal (2006)	Arts (UK)	Cross-sectional study	Various surveys, 2001-2006	The results show that all of these have some effects, though to a different extent and for different factors, the most important being level of education, age and gender.
Hill Strategies Research Inc. (2008a)	Arts (Canada)	Cross-sectional study	Canadian General Social Survey, 2005 20,000 Canadians 15 years of age or older	The report shows that, in many cases, even adjusting for the effects of key demographic variables, Canadians who participate in cultural activities are more likely to be socially active than Canadians who do not take part in cultural activities.
Hill Strategies Research Inc. (2008b)	Arts (Canada)	Cross-sectional study	Canadian General Social Survey, 2005 + 20,000 Canadians 15 years of age or older interviewed	The arts are an integral part of many Canadians' lives. Culture provides a means to be entertained, celebrate commonalities and differences, express individuality, feel a sense of attachment and experience artistic expression.
Hill Strategies Research Inc. (2010a)	Arts (Canada)	Cross-sectional study	Municipalities with fewer than 50,000 residents, based on 2006 municipal boundaries	The arts contribute to the QOL of many small and rural municipalities. One-quarter of the 140,000 artists in Canada reside in small and rural municipalities. This is almost exactly the same number of artists that reside in the cities of Toronto and Montreal combined. West Bolton (Quebec), Cape Dorset (Nunavut), Denman and Hornby Islands (B.C.)

				are on the top the list.
Hill Strategies Research Inc. (2010b)	Arts (Canada)	Cross-sectional study	Canadian General Social Survey, 2005 9,851 respondents	The report recognizes that there are many other factors that could play a significant role in the social indicators examined. However, some statistics in the report do show a relationship between some cultural activities and positive social engagement, such as performing arts attendance, art gallery attendance and book reading.
Kopczynski (2003)	Arts (USA)	Cross-sectional study	Household Survey	The Performing Arts Research Coalition provides a historic opportunity for five service organizations to work together in an unprecedented three-year project to measure the level of participation in and support for the arts in five communities across the country.
LeRoux (2012)	Arts (USA)	Cross-sectional study	American General Social Survey, 1972-2002 + 2,765 randomly selected participants	This research shows that interest in Arts predicts social responsibility. People with an active interest in the arts contribute more to society than those with little or no such interest.
Michalos & Kahlke (2008)	Arts (USA)	Cross-sectional study	1,027 participants	The study shows that arts-related activities and their corresponding satisfaction contributed relatively little to the perceived QOL of participants. While this may seem incredible, it is important to keep in mind the initial condition "in the context of all our predictors" and the qualifier "relatively". The inability of researchers to discover greater marginal or total impacts of arts-related activities on the perceived QOL may be the result of their use of the wrong search instruments for the great variety of values involved. It is an open question whether they used the best tools and found as much as there was to find or whether better tools would have found more.

Michalos & Kahlke (2010)	Arts (USA)	Cross-sectional study	1,027 participants	Different results were found in the province-wide versus the five-communities' surveys for the following. Compared to all seven life assessment measures, for the province, satisfaction with the QOL and happiness had the largest number of significant correlations with arts-related activities measured in "hours per week" engaged, while for the five communities, the single measure of satisfaction with the QOL had the largest number of significant correlations.
MORI (2005)	Arts (UK)	Cross-sectional study	287 secondary state schools throughout Scotland, 127 output areas selected Scotland's Census Output Areas (OAs), 2003-2005	When asked what 11 - 16 year olds are most likely to do in their spare time, the top 3 activities are watching T.V./Videos/ DVDs (87%), listening to music (87%) and going to friends' houses (84%). Activities they are less likely to become involved in include: going to an art gallery (4%), museum (7%) or attending a religious centre (10%). Youth clubs are largely attended by those aged under 15 and one in eight of 15 - 16 year olds also say they attend youth clubs.
Regional Arts Australia (2010)	Arts (Australia)	Cross-sectional study	85,000 Australians, 2009	A majority of interviewees believed the arts play a vital role in the community wellbeing and entertainment (80%), in cultural tourism (70%) and in economic development and job creation (50%). Participants identified a need for increased funding to build on existing levels of arts activity (90%) followed by a need for more skills development training and professional development opportunities to assist in the development of the sector (70%).
Runnalls (2007)	Arts (Canada)	Cross-sectional study	Municipal cultural practitioners in British Columbia and Ontario	The study found that while participants considered culture to be a crucial dimension of community sustainability, there are a number of pragmatic and conceptual issues within municipal systems that limit the capacity of cultural development in contributing to community viability. Optimism was expressed by practitioners, however, that there is an

			members of the Creative City Network of Canada, 2007	increasing awareness and understanding of the importance of the cultural dimension to a community's identity and prosperity.
Schellenberg (2006)		Cross-sectional study	147 6- to 11-year- olds from a middle-class suburb of Toronto + undergraduates at a suburban university campus in Toronto, aged 16 to 25 years	In both studies (primary students and undergraduate students), there was no evidence that musical involvement had stronger associations with some aspects of cognitive ability (e.g., mathematical, spatial–temporal, verbal) than with others. These results indicate that formal exposure to music in childhood is associated positively with IQ and with academic performance and that such associations are small but general and long lasting.
National Statistics (2009)	Arts (UK)	Cross-sectional study	2007-2008	Participation in arts and culture has been shown to contribute to individual wellbeing, self-esteem, confidence, new skills, improved mental and physical health and better educational attainment. At a community level, cultural participation can contribute to community cohesion, pride and confidence, reduce social exclusion, enhance a 'sense of place', renew interest in heritage and the environment, and make communities feel safer and stronger. Culture is also related to our sense of national identity and plays an important role in attracting tourists to Scotland to enjoy our cultural facilities, heritage and landscape.
Walker, Fleming & Sherwood	· ·	Cross-sectional study	2,406 adults in five of the CPCP	The more often people attend cultural events, the more ready they will be to climb a "ladder of increasing commitment" to the arts – as artists,

(2003)			communities, 1998	donors and parents who involve their children in the arts
Arts Council England (2006a)	Theatre (UK)	Case study	Arts Enrichment programme through PAYP with young people at risk	The programme resulted in positive attitudinal shifts in young people. Participants developed a new confidence in their verbal and written communication skills. And positive working relationships were developed between key workers and participants.
Arts Council England (2006b)	Visual arts (UK)	Case studies	20 case studies, 2006-2008	Artists and the arts have played a central role in education and lifelong learning for centuries. The arts foster innovation and creativity from the very earliest stages of a young child's development, and at all stages of the school curriculum. Outside formal educational settings, artists engage with some of society's most excluded groups: offenders and people within the criminal justice system, refugees, or older people in isolating urban environments. There is a growing body of evidence about the positive impact of arts education and of artists in education.
Martin & Bartlett (2003)	Arts (UK)	Case studies	16 theatres across England	There is a widespread feeling that recent changes in the theatre industry have been hugely positive. The national policy for theatre in England has provided a formal framework for development and has in many cases reinforced the theatres' objectives and strategies.
Matarasso (1997)	Arts (UK)	Case studies	8 art organisations or programmes, 1995-1997	The arts have a serious contribution to addressing contemporary social challenges. Rather than the cherry on the policy cake to which they are so often compared, they should be seen as the yeast without which it fails to rise to expectations.
Maughan & Bianchini (2004)	Arts (UK)	Case studies	11 festivals in East Midlands	The eleven cultural festivals studied are generating substantial wealth and employment; enhancing local image and identity; generating and sustaining audiences. The research also shows that arts festivals in the East Midlands create a very high level of satisfaction with the event for

				audience members and a very high level of participation by the public; a high number of return visits; and attract a varied audience profile.
Nakagawa (2010)	Arts (Japan)	Case study	Cultural policies pursued in the city of Osaka over 10 years, 1999-2008	While carefully investigating cultural policies pursued in the city of Osaka during the 10-year period between 1999 and 2008, the paper tries to elucidate the limits of the old style of urban cultural governance pursued there by detailing the process whereby independent, socially inclusive arts activities developed in Osaka. It looks at the failures of contemporary arts-focused cultural policies (stage one) and then focuses on the independent efforts of urban citizens to confront and overcome those setbacks (stage two).
Aylward (2005)	Theatre (UK)	Programme evaluation	44 youth theatre projects in England listed in the NAYT database	There is evidence that participation in youth theatre has a positive and wide-ranging impact on the communities where the theatres are located. Benefits include: the breaking down of barriers between different social groups and the formation of positive relationships; greater awareness and involvement of young people in local issues and active citizenship, culminating in an overall increased sense of community; changed perceptions about young people and the contribution they can make to their local communities; improved profile and reputation of a local community.
Garcia (2003)	Arts (UK)	Programme evaluation	28 individuals, 5 experts from Cultureshock, two groups of secondary school students and primary school students,	The efforts made in designing and producing a major cultural and arts programme in the lead up to the Commonwealth Games have resulted in remarkable cultural and arts achievements in Manchester and the North West. Despite the many challenges and limitations, it can be asserted that Cultureshock was a worthwhile endeavour from which valuable lessons can be extracted to inform the creation of a model for cultural events in the area.

			media coverage on the programme, eight organisations participating in the programme, 2001- 2002	
Garcia, Melville & Cox (2010)	Arts (UK)	Programme evaluation	Impact 08 research programme, 2005- 2010	Impacts 08 has delivered four main outcomes: the longitudinal impact analysis of the Liverpool ECoC as delivered by a wide range of stakeholders; an enhanced evidence base for the multiple impacts of culture upon regeneration and city renaissance, which has assisted local and regional cultural planning as well as informing the UK national debate; the provision of intelligence to guide decision-making for the Liverpool ECoC delivery team; the legacy of a replicable research framework, which can be used to explore the impacts of culture-led regeneration programmes beyond Liverpool and 2008.
Hamilton, Galloway, Langen, Cran, MacPherson, Burns & Snedden. (2008)	Arts (UK)	Programme evaluation	Scotland's Year of Highland Culture, 2007	Overall, the Year of Highland Culture had a positive impact. When asked about the perceived level of impact Highland 2007 had for the identity and prosperity of the Highlands and Islands, 80% of The Highland Council residents perceived an impact, and 40% or other Scots. Media coverage for the event was satisfactory; however there was critical comment from promoters about the effectiveness of the website and the way in which the brochures were set out. Although tourism providers welcomed Highland 2007 as an important way of stimulating the tourism industry, they felt that there was a need for closer communication between event planners and the industry.

Kilroy, Garner, Parkinson, Kagan & Senior (2007)	Arts (UK)	Programme evaluation	6 projects, 2003- 2006	This evaluation has shown that it is through combining a holistic and person centred approach with a positive and supportive enviro-culture that the potential for transformative change is enhanced. Arts acting as a catalyst within the 'considered' environment offer the opportunity to enter into 'flow' states where there is a perceived relief from negative thinking and unhealthy patterns of behaviour. This alongside enhanced relationships and new skill development can raise expectations and open new possibilities, encouraging perceived wellbeing from which transformative change can arise.
Lab (2009)	Arts (Europe)	Programme evaluation	16 members from cities that have been or plan to be European Capitals of Culture, 2007-2009	Although one of the requirements for a city to become a European Capital of Culture is "involving local people and integrating local culture", this aspect of the cities' experience is the least considered and evaluated in the overall body of research. More recent research indicates a decided shift and an increased focus on the ongoing local legacy of the programme, as seen in the research from Lille 2004, Luxembourg 2007 and the ongoing research from Liverpool 2008 and Stavanger 2008.
Stevenson (2010)	Arts (UK)	Programme evaluation	Survivors of sexual abuse over the age of 16, 2009	The findings from the evaluation outlined in this report clearly show that the outcomes have been met successfully for many participants: participants were engaged in new activities and learn creative skills, both their confidence and social skills improved, and participants became more engaged in their local community and its culture.
Bunting (2007)	Arts (UK)	Qualitative study	50 members of ACE staff, over 80 artists and arts managers, around 30 stakeholder organisations,	The report uncovered a collective desire for new, surprising, exciting encounters with the arts, and how important innovation and public engagement are to the health of the arts ecology and the value it creates. It also shows that there is an important role for public funding within this ecology, but that everyone in the system needs to manage

			over 200 members of the public, 1,200 contributions to the open consultation	the associated tensions a little more constructively.
Stanley (2006)	Arts (Canada)	Qualitative study	University scholars, cultural practitioners, policymakers and researchers from various national arts councils, 2004-2006	The participants at the workshop identified six social effects of culture, arts, and heritage: enhancing understanding and capacity for action; creating and retaining identity; modifying values and preferences for collective choice; building social cohesion; contributing to community development; and fostering civic participation. At first sight, these effects seem esoteric, arbitrary, and unconnected. A careful examination reveals, however, that there is an underlying connection between them. They are really different stages in the appropriation of cultural content into the public life of members of society. In other words, the end result of cultural participation is the improved capacity to take part in the collective life of society: cultural citizenship.
EKOS (2008)	Arts (UK)	Economic evaluation	Various benchmarking studies	Culture is a critical component of the continued economic and social renaissance of the North West region. The Cultural Sector as a whole contributes £15bn to the region's economy. A critical mass and excellence in culture are essential prerequisites for a competitive region.
Arts Council England (2004)	Arts (UK)	Narrative review		The document draws together research evidence on the impact of the arts on employment, education, health, criminal justice and regeneration. It presents findings on the impact of the arts on individuals and on communities. The document is work in progress and we plan to update it at regular intervals as new research becomes

				available.
Australian Expert Group in Industry Studies [AEGIS] (2005)	Arts (Australia)	Narrative review		Research results provide evidence of diversity and complexity rather than of clear lines of causality or even associations between arts and cultural programs or activities and their impacts in the multiple arenas of the social domain. In Australia there is great interest among policymakers in considering social as well as economic impacts when developing policies and programs for arts and cultural activities and in encouraging collaboration between arts fields and other social and economic initiatives in the pursuit of social objectives.
Azmier (2002)	Arts (Canada)	Narrative review		This paper argues that, because it is inherently difficult to measure the artistic soul of a city, analysing the effects of the arts is fraught with challenges. Ultimately, the value of the arts cannot be fully quantified and a degree of uncertainty regarding their role in a city's economic success must be accepted. Nonetheless, the existing research does make a strong case for recognizing the importance of enhancing the arts in western Canada's urban centres.
Carlsen (2007)	Theatre, festival (UK)	Narrative review	2007	Festivals and events have assumed a prominent place in the social and economic fabric of Edinburgh, to a point where it now enjoys a reputation as a leading festival and event destination. Most of the research and evaluation effort has been concerned with "proving" the economic benefits of individual events. The limitations of focusing on narrow economic outcomes are now widely recognized in terms of the comparability, reliability, and utility of the estimates produced. While the attention of stakeholders has been on economic benefits, the very important cultural, community, and social benefits have been overlooked. Important issues such as engagement with the arts, community, cultural, social, and stakeholder benefits and disbenefits

				produced have yet to be researched in any systematic way.
Danielsen (2008)	Arts (Norway)	Narrative review		The report argues that the explicit concern for equality of access has alleviated some of the economic and geographical barriers toward participation, but has had little impact on the cultural divides that tend to structure audiences for culture and the arts.
Duxbury & Gillette (2007)	Arts (Canada)	Narrative review		This paper presents a brief overview of sustainability and community development, outlines prevailing themes in the emerging cultural sustainability literature, and presents three examples of sustainability models.
Evans (2005)	Arts (UK)	Narrative review		The rationale for cultural input to area and neighbourhood regeneration has been extended to include QOL, as well economic outcomes. The evidence of how far flagship and major cultural projects contribute to a range of regeneration objectives is, however, limited. Measuring the social, economic and environmental impacts attributed to the cultural element in area regeneration is problematic and the 'evidence' is seldom robust.
Galloway (2008)	Arts (UK)	Narrative review	Key literature added to the Scottish Government's Impact Database, 2004 -2007	There is a growing body of evidence about the effects of culture on environmental, economic and social regeneration, and this goes well beyond mere boosterism. However there are limitations to this evidence base, key issues being sustainability and the question of cultural impact, and a longer term approach to evaluating cultural and social impacts has been called for.
Galloway (2009)	Arts (UK)	Narrative review		The article considers the alternative generative understanding of causation that underpins theory-based evaluation approaches, favoured recently in the UK as part of the "What Works?" agenda. While these approaches fit well with knowledge about the determinants of arts

				impact, the article considers whether in fact these approaches offer an effective strategy for understanding how and why arts engagement can result in social change. The limitations and possibilities of theory based evaluation are considered with reference to four recent UK studies of the impact of the arts on individuals which make use of them.
Guetzkow (2002)	Arts (USA)	Narrative review		Research on how the arts impact communities is a burgeoning and wide ranging field of research. Despite the variety of research subjects and methodologies alive and well in the field, there are a number of avenues this literature has yet to explore.
Hill Strategies Research Inc. (2008)	Arts (Canada)	Narrative review	4 reports, 2005- 2008	Four reports related to arts attendance, including an American study of the intrinsic impacts of performance attendance; a Canadian examination of the social impacts of performing arts attendance; a study of attendees' motivations, abilities and opportunities to participate; and a report on the demographic and cultural factors involved in performing arts attendance in Canada.
Oakley (2004)	Arts (UK)	Narrative review		The cultural economy is growing at a faster rate than the rest of the economy and this is expected to continue. As a whole, the evidence base for culture is under-developed, which prevents claims for the benefits of culture from being conclusive. Much research is ad hoc, small-scale and/or one-off studies which do not offer sufficient evidence for the case they make. However, the situation has been recognised and is improving.
Ramsden <i>et al.</i> (2011)	Arts (UK)	Narrative review		The report identified a range of different impacts and outcomes in terms of amateur arts groups. For individuals, participation in arts based activities 'for their own sake' could promote their mental health and wellbeing. Improvements in educational attainment and functioning in the work-place were also reported as positive outcomes in some of the

				literature. Claims were also made about the economic role such activities play in communities. However in this, and other areas, there was a lack of empirical evidence exploring or quantifying the exact nature of impact.
Reeves (2002)	Arts (UK)	Narrative review	Arts Council of England's library database, staff from a range of DCMS-sponsored Non-Departmental Public Bodies, 2001	The Review has shown how interest in, and recognition of, the impact and value of arts and cultural activity has grown since the early 1980s. The sector itself has embraced economic and more recently, social rationales for its activity, alongside aesthetic and cultural rationale, in order to argue for increased recognition of the contribution of arts and creativity to wider social and economic wellbeing, and for increased public investment in the face of competing public policy priorities. There has been a growing body of research and studies which have claimed to demonstrate the positive economic and social benefits of arts interventions, alongside a wealth of anecdotal evidence, although more research is needed in this field.
Tarr (2008)	Arts (Australia)	Narrative review	Australian young children	The findings show that the arts-based pedagogies applied throughout the research project had a definite effect on the children's awareness of the natural environment. The report also shows that the action research approach used throughout the project resulted in the two early childhood professionals developing new techniques for creating meaningful content for the programme.
Jeannotte (2003)	Arts (Canada)	Narrative review	Canadian General Social Survey, 1998	In recent years, cultural policy makers have begun to express a stronger interest in the linkages between these forms of capital. This paper focuses on linkages between personal investments in culture and the propensity to volunteer, using data from the Canadian General Social Survey. It concludes that there are collective benefits from investments in cultural capital and that these benefits make a

				significant contribution to social cohesion.
National Governors' Association (2002)	Arts (USA)	Narrative review	States using arts in education and after-school programs, 2001	In a human capital-based, knowledge economy, the loss of workforce productivity is tantamount to throwing money away. In this environment, states do not have the option of excluding at-risk or incarcerated youth populations from the workforce. Diverse arts education programs—in and out of school curricula—have proven to be valuable options for states seeking to develop advanced workforce skills for general, at-risk, and incarcerated students. With the help of the arts, governors can ensure that skills are developed effectively, completely, and to the best advantage of the states and their constituencies.
Stern & Seifert (2008)	Arts (USA)	Narrative review		It appears that growth of the creative economy is exacerbating inequality and exclusion. Public policy promoting the creative economy has two serious flaws: one, a misperception of culture and creativity as a product of individual genius rather than collective activity; and, two, a willingness to tolerate social dislocation in exchange for urban vitality or competitive advantage.
KEA (2009)	Creativity (Europe)	Expert opinion		Culture-based creativity is linked to the ability of people, notably artists, to think imaginatively or metaphorically, to challenge the conventional, and to call on the symbolic and affective to communicate. Culture-based creativity has the capacity to break conventions, the usual way of thinking, to allow the development of a new vision, an idea or a product. The nature of culture-based creativity is closely linked to the nature of artistic contribution as expressed in art or cultural productions. The spontaneous, intuitive, singular and human nature of cultural creation enriches society.

Appendix 9: Literature summaries for Social Impacts of Heritage

Introduction

Each of the tables in Appendix 9 are structured in order of the hierarchy of evidence (see Table 2.3 in main report). For example, Table A9.1 begins with three cross-sectional studies, followed by one case study, followed by three qualitative studies etc. The type of study is indicated in the third column. Within each category the references are listed alphabetically.

Table A9.1 Summary of Heritage and Social Capital

Authors	Arts & Country	Study type in evidence hierarchy	Sample	Findings
Bradley, Bradley, Coombes & Tranos (2009)	Heritage (UK)	Cross-sectional study	500 residents, 600+ young people, 2009	Living in more historic built environments is linked in adults to a stronger sense of place. For both adults and teenagers, evidence of more interest in historic built environments also links with a stronger sense of place (NB overall the model is weaker for teenagers). Although a very strong sense of place can have less positive consequences (e.g. fostering an 'embattled' and unwelcoming localised sense of identity), there are more references in the literature to such rootedness (working with higher levels of social capital) supporting beneficial social outcomes.
DCMS (2010)	Heritage (UK)	Cross-sectional study	6,097 adults and 537 children , 2009-2010	The Taking Part Survey measures engagement and non-engagement in culture, leisure and sport in England. It is the key evidence source for the Department for Culture, Media and Sport (DCMS), providing reliable national estimates of participation and supporting the Department's aim of improving the QOL for everyone by providing people with the chance to get involved in a variety of these

				opportunities.
DCMS (2011)	Heritage (UK)	Cross-sectional study	6,097 adults and 537 children , 2010-2011	The Taking Part Survey measures engagement and non-engagement in culture, leisure and sport in England. It is the key evidence source for the Department for Culture, Media and Sport (DCMS), providing reliable national estimates of participation and supporting the Department's aim of improving the QOL for everyone by providing people with the chance to get involved in a variety of these opportunities.
BDRC (2009)	Heritage (UK)	Case study	1 castle, 15 families, 2008-2009	To break parents' and children's non-participation cycle, school trips can be exploited as well as family activities and outreach activities so as to challenge the 'boring' label. It is important to create a 'comfortable' atmosphere for people who might be out of their comfort zone and for whom first impressions are critical. For product and services, kids audio-guide and technology is highly important. For communications channels, emphasis must be laid on the camping and caravanning sector, as the sector is highly outdoors focussed, and popular mass media such as TV series.
McDonald (2011)	Heritage (Australia)	Qualitative study	3,200 participants	The results emphasise that people are highly motivated to engage in heritage activities that they find directly relevant to their own specific interests, culture or history. Heritage was defined broadly, encompassing a wide range of objects, places and experiences, summarised under 15 categories. The key criteria in determining whether a particular object was viewed as being worthy of heritage protection were its perceived importance to the nation, personal relevance, irreplaceability and uniqueness.
National Audit Office (2009)	Heritage (UK)	Programme evaluation	Black and minority ethnic groups, lower socio-	English Heritage estimated it delivered 251 outreach projects over the three-year period. English Heritage has introduced some initiatives to address barriers to visiting its properties. Despite these positive steps,

			economic groups and people with disabilities, 2005- 2008	and a commitment to increase the number of visitors from priority groups to its sites over the period, English Heritage did not set a baseline or target for the diversity of visitors to its properties. English Heritage is respected for its outreach work, but has been poor at evaluating the long term impact of projects or of wider initiatives to broaden participation.
Rahim & Mavra (2009)	Heritage (UK)	Qualitative study		This paper contributes to the NAO evaluation above by conducting research with three under-represented groups in visits to heritage sites. It concludes with five common themes in this under-representation: lack of awareness of heritage; assumptions about typical audiences for heritage; perceived cultural irrelevance of heritage; cost barriers; and poor transport links.
Pendlebury, Townshend & Gilroy (2004)	Heritage (UK)	Narrative review		Based on an understanding of policy and action in England, this paper sets out a framework for considering how this wider cultural built heritage might contribute to social inclusion. A fundamental binary divide is made between the role of cultural built heritage as historic places and opportunity spaces in which regeneration may occur. However, in neither case is action necessarily socially inclusive. The paper concludes that a greater clarity of objectives and definitions is necessary if such heritage is to meet its potential to be socially inclusionary.

Table A9.2 Summary of Heritage and Multiple Impacts

Authors	Heritage & Country	Study type in evidence hierarchy	Sample	Findings
Burns Owens Partnership (2009)	Heritage (UK)	Cross-sectional study	25 projects, selected randomly by HLF	Participation in HLF projects helps to maintain and deepen the skills, knowledge and social networks of volunteers, to increase their sense of belonging to their local communities, and above all it gives them a sense that they are playing a useful part in things.
Applejuice (2008)	Heritage (UK)	Programme evaluation	100 HLF funded projects, 2006- 2007	HLF funded projects create opportunities for the achievement of a variety of positive outcomes such as increasing knowledge and understanding of heritage; increasing the enjoyment of participants in, and visitors to, heritage projects; and opening up heritage to wider audiences. HLF projects are generally inclusive and target diverse audiences successfully and where project activities are targeted at specific groups or communities, especially children (61%). HLF projects also provide varied opportunities for volunteering and involve participation and learning.
ECOTEC (2004)	Heritage (UK)	Case studies	42 English cathedrals, 2004	The estimates which are presented in the report suggest that Anglican cathedrals in England make a significant contribution to both economic and social wellbeing, the latter including education, training and volunteering opportunities, in addition to the potential for community outreach work.
McDonald (2011)	Heritage (Australia)	Case studies	3,200 participants in focus groups	The results emphasise that people are highly motivated to engage in heritage activities that they find directly relevant to their own specific interests, culture or history. Heritage was defined broadly, encompassing a wide range of objects, places and experiences,

				summarised here under 15 categories. The key criteria in determining whether a particular object was viewed as being worthy of heritage protection were its perceived importance to the nation, personal relevance, irreplaceability and uniqueness.
Thomas (2007)	Heritage (UK)	Case studies		The conclusions of the work suggest that intrapreneurial behaviour in existing organizations is directly linked to staff engagement and empowerment.
Ela Palmer Heritage (2008)	Heritage (UK)	Narrative review	40 studies	Identifies anecdotal evidence of the effects of heritage-led regeneration on social capital formation, potential effects on health, conflicting evidence of the effects on crime, and piecemeal evidence of effects on intermediate education outcomes.
Maeer, Fawcett & Gillick (2012)	Heritage (UK)	Narrative review		This includes summaries of project evaluations and studies which identify examples of improved social inclusion and social cohesion, personal skill development and improved self concepts for volunteers, and the contribution of heritage to wellbeing. However, many of the studies referred to are broader than heritage - e.g. referring to the built environment, natural environment, green space.
Pendlebury, Townshend & Gilroy (2004)	Heritage (UK)	Narrative review		Based on an understanding of policy and action in England, this paper sets out a framework for considering how this wider CBH might contribute to social inclusion. A fundamental binary divide is made between the role of CBH as historic places and opportunity spaces in which regeneration may occur. However, in neither case is action necessarily socially inclusive. The paper concludes that a greater clarity of objectives and definitions is necessary if CBH is to meet its potential to be socially inclusionary.

Appendix 10: Literature summaries for Social Impacts of Museums, Libraries and Archives

Introduction

Each of the tables in Appendix 10 are structured in order of the hierarchy of evidence (see Table 2.3 in main report). For example, Table A10.1 begins with one programme evaluation, followed by two narrative reviews etc. The type of study is indicated in the third column. Within each category the references are listed alphabetically.

Table A10.1 Summary of Museums, Libraries and Archives and Wellbeing

Authors	MLA & Country	Study type in evidence hierarchy	Sample	Findings
Bolitho (2011)	Libraries (Australia)	Programme evaluation	12 week pilot reading group at a local aged care hostel, 2010	Responses from participants were all positive, with residents commenting that they looked forward to the group as it made them think for themselves and gave them something to think about aside from their ailments and the monotony of the day.
Thompson, Aked, McKenzie, Wood, Davies & Butler (2011)	Museums (UK)	Narrative review	Happy Museum Project, 2011	By encouraging happiness and wellbeing, museums can play a part in helping people live a good life without costing the earth. They can also lead by example, for instance by reducing their environmental impact and by engaging ever more deeply with communities. They can show leadership in the way they work with other organisations, for example by supporting local third-sector organisations or by encouraging business sponsors to be more ethical.
Brewster (2009)	Libraries (UK)	Narrative review		It has been said that the role of the librarian is to provide the right book to the right person at the right time. It is certainly true that librarians are information providers who utilise their skills to connect library users with

	fiction and nonfiction texts through a variety of stock management and reader development techniques. They also make a positive contribution to the mental health and wellbeing of those who utilise the library in their community, through informal acts such as helping people find books, discussing books with readers, and fostering reading groups.
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Table A10.2 Summary of Museum, Libraries and Archives and Social Capital

Authors	MLA & Country	Study type in evidence hierarchy	Sample	Findings
DiMaggio & Mukhtar (2004)	Museums (USA)	Time-series study	Surveys of Public Participation in the Arts over three decades (years 1982, 1992, and 2002), 1982-2002	Trend data are not consistent with the meltdown scenario (a dramatic deflation in the value of the arts as cultural capital), but do suggest change in the position of different arts genres within cultural capital and ongoing attrition in the audience for many of the arts.
Baird & Greenaway (2009)	Museums (UK)	Cross-sectional study	84 members of Museum Galleries Scotland, 2009	The research looked at the role and impact of volunteers in museums and galleries, and the impacts of volunteering on workforce development, the volunteers themselves and on communities. Key findings include: 90% of respondent museums have volunteer staff and nearly a quarter are entirely run by volunteers; volunteers significantly increase the organisation's capacity; the greatest benefit of volunteering for volunteers is a sense of achieving something useful. This is of particular importance for older volunteers.
Murray (2010)	Museums (UK)	Cross-sectional study	173 museum sites from across the nine Renaissance regions, 2010	Total number of visits to museum has increased, with a rise in participation from children and adults in onsite activity. Outreach activities and higher education visits are also on the rise.
Jensen (2010)	Museums (UK)	Case study	Young mothers aged 17-22, 2010	The individuals participating in the Fitzwilliam Museum's outreach programme had no adult experience with cultural institutions and would have remained culturally excluded if not for the outreach programme. This outreach activity provided a bridge between vaguely remembered

				childhood museum experiences and adulthood for the mothers engaged. The outreach visits provided an all-around positive experience for the young mothers (all under 22) and their young children (all under 3). The exclusionary view of museums' role requires updating in the light of this study.
Lockyer-Benzie (2004)	Libraries (Australia)	Case study	The six public library of the City of Swan, 2004	The City of Swan Public Library Service has not approached social inclusion in a formal or structured sense. However, indirectly the library service is thinking inclusively in relation to library operations, planning and delivery of services and programmes. Although these programmes do address a variety of needs, the issue of cultural and social norms potentially posing limitations for marginalized people who might benefit from the library service, does need further exploration.
McCall (2009)	Museums (UK)	Case study	Local authority museums in the Scottish Borders, 2009	Taken from museum curators' perspectives, the findings suggest that social inclusion policies have not filtered through the system to reach the curators due to unclear government policy and confusion regarding terminology, strategy and guidelines. Curators found it difficult to engage with social inclusion discourse, despite employing socially inclusive actions in everyday practice. The relationship between the local community and museum was seen to be unique and multilayered, with a perceived dimension of community ownership, which has implications for social policy on central, local and individual levels.
Eastell (2008)	Libraries (UK)	Programme evaluation	150 disadvantaged young people aged 11-19 in the South West region of England, 2005- 2007	The project found that disadvantaged young people are happy to offer ideas to improve their local public library if they have had the opportunity to develop a trusting relationship with library staff. However, many young people feel that they are often asked for their views on public services but are seldom told what happens as a result. The project found that if public libraries are to be successful in involving young people in decision-making, library staff need training and

				sufficient resources to work in-depth with relatively small groups of young people.
ERS (2010)	Libraries (UK)	Programme evaluation / case studies	58 Community Libraries Programme participant authorities, 2010	The evaluation highlights emerging themes and lessons for public libraries, particularly around their role in civic engagement in local communities through volunteering, and their ability to work in partnership with voluntary and community based organisations, as well as local authorities.
Morris Hargreaves McIntyre (2002)	Museums (UK)	Programme evaluation	Eight National Museums and Gallery of Wales sites, 2002	The findings of the research informed NMGW's strategies for broadening audiences and reaching those groups currently under-represented in visitor profiles. The project also identified opportunities for NMGW to engage socially excluded communities and work with them in ways that contribute towards the wider process of social inclusion and the combating of disadvantage and discrimination.
National Institute of Adult Continuing Education (2009)	Museums, Libraries, Archives (UK)	Programme evaluation	2000-2003	In Touch, a volunteer programme run jointly by the Manchester Museum and Imperial War Museum North, does more than teach individuals about the museums and their collections, it gives them skills and experience they can transfer to their lives and future employment
Morris Hargreaves McIntyre (2002)	Museums, Libraries, Archives (UK)	Qualitative study	75 young people aged between 3 and 16, 2009-2010	Children belong to different ecological models, according to their age group. It is possible to design a marketing mix adapted to each age group, following their specific needs and motivations, so as to enable them to engage better with Museums, Libraries and Archives.
Porter (2005)	Libraries (USA)	Narrative review		In general, participation was not intense enough to make substantial differences in literacy, and the average duration of participation did not systematically improve over the years studied, though the average hours in months when students did attend increased slightly. The

	implementation research suggests why improving student persistence is so difficult and reveals the kinds of support that adult learners need in order to persist.
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Table A10.3 Summary of Museums, Libraries and Archives and Education

Authors	MLA & Country	Study type in evidence hierarchy	Sample	Findings
Newman <i>et al.</i> (2010) (CASE)	Sport (UK)	Systematic review	11 studies on attending museums, galleries and heritage sites and learning outcomes.	Concludes that there is promising but insufficient evidence that using school libraries enhances education attainment; and that visiting museums, galleries and heritage sites improves students' attitudes to school and self-confidence in their learning abilities.
Kanevsky, Corke, & Fangkiser (2008)	Museums (Canada)	Cohort study	171 participants, 30 non- participants	No difference between participants and non-participants in a museum- based school programme in respect of positive self-perceptions - character, self-efficacy and attitude toward school - over a two year period.
Morris Hargreaves McIntyre (2002)	Museums, Libraries, Archives (UK)	Cross-sectional study	75 young people aged between 3 and 16, 2009-2010	Children belong to different ecological models, according to their age group. It is possible to design a marketing mix adapted to each age group, following their specific needs and motivations, so as to enable them to engage better with Museums, Libraries and Archives.
National Institute of Adult Continuing Education (2009)	Museums, Libraries, Archives (UK)	Case study	In Touch Programme	In Touch, a volunteer programme run jointly by the Manchester Museum and Imperial War Museum North, does more than teach individuals about the museums and their collections, it gives them skills and experience they can transfer to their lives and future employment.

Hooper- Greenhill (2002)	Museums (UK)	Programme evaluation	2000-2001	The evaluation demonstrated the enormous success of the Education Challenge Fund to increase the educational capacity of smaller museums and to enhance visitor experiences.
Murray (2010)	Museums (UK)	Programme evaluation	173 museum sites from across the nine Renaissance regions, 2010	Total number of visits to museums has increased, with a rise in participation from children and adults in onsite activity. Outreach activities and higher education visits are also on the rise.
Porter (2005)	Libraries (USA)	Narrative review		In general, participation was not intense enough to make substantial differences in literacy, and the average duration of participation did not systematically improve over the years studied, though the average hours in months when students did attend increased slightly. The implementation research suggests why improving student persistence is so difficult and reveals the kinds of support that adult learners need in order to persist.

Table A10.4 Summary of Museums, Libraries and Archives and Multiple Impacts

Authors	MLA & Country	Study type in evidence hierarchy	Sample	Findings
Cheney (2002)	Museums (Canada)	Time-series study	Cultural participation in museums, 1971-1998	While overall participation rates have sustained the levels of the 1970s, participation rates in 1998 do not reflect the growth in participation projected then. Furthermore, the spectrum of people visiting museums has narrowed, rather than being 'democratised'. Those with post-secondary education have always been more likely to visit museums but now represent a majority of visitors for the first time. That museums are now attracting relatively fewer people and fewer types of people suggests a diminishing presence for museums. Nonetheless, museums' audiences are noticeably less elite than often portrayed, and there are opportunities for changes in policy and programmes designed to reach more people.
Wheelock (1999)	Libraries (USA)	Time-series study	Annual surveys from participating +28 case + data from activity log, 1994-1998	This four-year evaluation of Wallace's Library Power initiative – which included investments in new materials and renovated spaces – shows the capacity of school libraries to promote learning.
AEA (2005)	Museums (UK)	Cross-sectional study	Tyne and Wear Museums audiences, 2004- 2005	Social impact is an imprecise concept, used in multiple ways by government, researchers, arts institutions and others. There is no agreed-upon taxonomy of preferred audiences, preferred impacts or preferred techniques to measure impacts. Little distinction is currently made between short- and long-term impacts. Even recent and innovative data-collection efforts, such as the GLLAM surveys, catch

				little information on the social impact of museum programmes.
Mirchandani & Norgrove (2009)	Museums, UK	Cross-sectional study	22 projects, 2009	The programme would appear to have had a significant impact on the organisations involved. For those fairly advanced in their research, partnership development and acquisitions, the project has given them a new way of engaging with different audiences through the medium of their core collections – having a positive impact on collections, audience and organisational development. This supports HLF's strategic aims and will continue to be tracked in the future.
Murray (2010)	Museums (UK)	Cross-sectional study	173 museum sites from across the nine Renaissance regions, 2010	Total number of visits to museums has increased, with a rise in participation from children and adults in onsite activity. Outreach activities and higher education visits are also on the rise.
Streadfield, Bryson & Usherwood (2002)	Museums, Libraries, Archives (UK)	Cross-sectional study	Staff in eight organizations, drawn from archive, library and museum services in the South West	Although the results were modest and there were variations between projects, the data show that museums, archives, and libraries do have a social impact. In addition the project demonstrates that the social audit technique enables the development of a framework for an informed value judgement.
Dodd (2002)	Museums (UK)	Case study	Open Museum	This research demonstrates that the Open Museum has fulfilled its early ambitions to be dedicated to widening the ownership of the city's collection; freeing the reserves which lie hidden in the stores and cupboards, forging links between the skills of the museum staff and the needs of interested groups to create a museum that is related to the lives of the people in their own communities. Participants interviewed as part of this study clearly illustrate the profound significance the Open

				Museum has had on their lives.
Jensen (2010)	Museums (UK)	Case study	Young mothers aged 17-22, 2010	The individuals participating in the Fitzwilliam Museum's outreach programme had no adult experience with cultural institutions and would have remained culturally excluded if not for the outreach programme. This outreach activity provided a bridge between vaguely remembered childhood museum experiences and adulthood for the mothers engaged. The outreach visits provided an all-around positive experience for the young mothers (all under 22) and their young children (all under 3). The exclusionary view of museums' role requires updating in light of present study.
McClure, Fraser, Nelson & Robbins (2001)	Libraries (USA)	Case studies	12 libraries, 2000	Study results indicate that patrons believe libraries contribute to their financial wellbeing, provide economic benefits to local businesses, and support the prosperity of the community. This study provides an important first step in documenting those impacts, describing programs and services that support economic development, and offering strategies that policymakers and the library community might use to enhance this service role.
Simon Jaquet Consultancy Services Ltd (2009)	Museums (UK)	Case studies	5 museums selected by Museums Galleries Scotland, 2008	The museums were found to contribute to the Scottish Government's National Performance Framework, as well as to the development of physical, human, social, economic and cultural capital within their communities and they take a lead in creating community cohesion in their areas.
Dodd, Jones, Watson, Golding & Kirk	Museums, Libraries, Archives (UK)	Programme evaluation	Their Past Your Future 2 programme, 2008-	Across the programme, TPYF2 created inspiring and memorable activities which have helped cement relationships in some communities through engaging different generations. The programme showed the critical and powerful role that cultural organisations can play in

(2011)			2010	communities developing a sense of self-worth. The groundwork in many cases has been laid for the development of much more sustained contact with communities and the development of long-term strategies that will put community needs at the heart of what museums, libraries and archives do.
Burns Owens Partnership (2005)	Museums, Libraries, Archives (UK)	Narrative review		This review of research into the social impact of museums, libraries and archives shows that there are three major weaknesses in the current evidence base: the lack of any substantial longitudinal, comparative data on social impact; absence of an agreed model for describing social impact; and a comparative lack of research into social impact related to cultural diversity and health/mental health.
Burns Owens Partnership (2009)	Libraries (UK)	Narrative review		The literature review shows that public libraries in England are now involved in the delivery of a wide ranging menu of services, activities and resources. These yield social benefits in the form of education, health and social capital, and evidence of final outcomes is strong because of the centrality of literacy and learning to library services.
Wavell, Baxter, Johnson & Williams (2002)	Museums, Libraries, Archives (UK)	Narrative review	Literature published during a five year retrospective period	The most compelling evidence from the review indicates that the sector has an impact on personal development: i.e. skills acquisition; new experiences; increased self-confidence and self-esteem; changed or challenged attitudes; developing creativity, cultural awareness, communication and memory; and providing support for educational courses. Evidence of wider social impacts is not apparent. While the profession is beginning to recognise access as a priority, there is a need to increase access throughout the sector.
Yu, Dempsey &	Libraries	Narrative review		The study concludes that the emerging network services bring together previously distinct participants and services and may lead to a new

Ormes (1999)			division of labour in libraries in such activities as document delivery. As public libraries build the 'people's network' it will be important to learn from and build on community networking experiences.
Pricewaterhous eCoopers (2008)	Museums, Libraries, Archives (UK)	Expert opinion	From the evidence gathered to date, it is considered that sufficient data is available in which to examine the economic benefits across each of the business areas. As anticipated, many of the social benefits, given their more nebulous nature, will prove more challenging to quantify.