### SDC Study characteristics

i. Studies examining socioeconomic position and the attitudes of potential donors to living kidney donation

<table>
<thead>
<tr>
<th>Study Reference</th>
<th>Period of data collection</th>
<th>Country</th>
<th>Sample group</th>
<th>Sample size</th>
<th>Mean Age (years)</th>
<th>% female</th>
<th>Marker of SEP</th>
<th>Study design</th>
<th>Overall % willing to donate to friend/relative</th>
<th>% willing to donate to friend/relative in lower SEP group</th>
<th>% willing to donate to friend/relative in higher SEP group</th>
<th>Statistically significant difference between high and low SEP?</th>
<th>Change in willingness to donate with increasing SEP</th>
<th>Newcastle Ottawa Scale Score (max 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Al-Shammar 1991)</td>
<td>1989</td>
<td>Saudi Arabia</td>
<td>Residents of Riyadh, Saudi Arabia</td>
<td>753</td>
<td>30.7</td>
<td>36</td>
<td>Education level</td>
<td>Cross-sectional survey</td>
<td>66</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
<td>NR&lt;sup&gt;a&lt;/sup&gt;</td>
<td>No</td>
<td>Selection=0</td>
</tr>
<tr>
<td>(Sanner 1998)</td>
<td>NR</td>
<td>Sweden</td>
<td>Residents of Uppsala, Sweden</td>
<td>1060</td>
<td>NR (18-70)</td>
<td>53</td>
<td>Education level</td>
<td>Cross-sectional survey</td>
<td>81</td>
<td>74</td>
<td>85</td>
<td>No Chi2 p&gt;0.05</td>
<td>↑</td>
<td>Selection=2</td>
</tr>
<tr>
<td>(Boulware, Ratner et al. 2002)</td>
<td>2000</td>
<td>USA</td>
<td>Residents of Baltimore (14 zip codes)</td>
<td>385</td>
<td>NR</td>
<td>66</td>
<td>Assessment of the importance of:</td>
<td>Cross-sectional survey</td>
<td>66</td>
<td>66</td>
<td>65</td>
<td>No p=0.8</td>
<td>-</td>
<td>Selection=3</td>
</tr>
<tr>
<td>(Aghanwa, Akinsola et al. 2003)</td>
<td>1996-1998</td>
<td>Nigeria</td>
<td>Three samples – patient relatives, health workers, rural dwellers</td>
<td>316</td>
<td>34.37</td>
<td>44</td>
<td>Urban/rural/income</td>
<td>Cross-sectional survey</td>
<td>51</td>
<td>28</td>
<td>58</td>
<td>Yes Chi2 p&lt;0.05</td>
<td>↑</td>
<td>Selection=1</td>
</tr>
</tbody>
</table>

<sup>a</sup>SEP=socioeconomic position, <sup>b</sup>NR=Not reported; <sup>c</sup>African Americans were less willing to donate to relatives than whites (p=0.04) and socioeconomic factors were independently associated with willingness to donate and significantly attenuated the observed ethnic variation. *reference numbers refer to main article reference list.
<table>
<thead>
<tr>
<th>Study</th>
<th>Year</th>
<th>Country</th>
<th>Population</th>
<th>Design</th>
<th>Case Number</th>
<th>Education Level</th>
<th>Analysis</th>
<th>Chi² p</th>
<th>Selection</th>
<th>Comparability</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conesa 2004</td>
<td>2001</td>
<td>Spain</td>
<td>General population of region of Spain</td>
<td>Multicentre – Regional sampling</td>
<td>310</td>
<td>40</td>
<td>63</td>
<td>Education level</td>
<td>Cross-sectional survey</td>
<td>86</td>
<td>89</td>
</tr>
<tr>
<td>Piccoli, Soragna et al. 2006</td>
<td>2002-2003</td>
<td>Italy</td>
<td>High school students and technical institute students</td>
<td>Multiple high-schools /institutes / single area</td>
<td>1676</td>
<td>NR</td>
<td>47%</td>
<td>Education level/type</td>
<td>Cross-sectional survey</td>
<td>78</td>
<td>78</td>
</tr>
<tr>
<td>Zhang, Li et al. 2007</td>
<td>NR</td>
<td>China</td>
<td>University undergraduates and postgraduates</td>
<td>Multicentre</td>
<td>434</td>
<td>NR</td>
<td>56</td>
<td>Economic background (urban vs rural)</td>
<td>Cross-sectional survey</td>
<td>50</td>
<td>57</td>
</tr>
<tr>
<td>Rios, Martinez-Alarcon et al. 2008</td>
<td>2005-2006</td>
<td>Spain</td>
<td>German residents of Spain</td>
<td>Single centre - Autonomous Regional Community of Murcia</td>
<td>218</td>
<td>46</td>
<td>51</td>
<td>Education level</td>
<td>Cross-sectional survey</td>
<td>92</td>
<td>0</td>
</tr>
<tr>
<td>Segev, Powe et al. 2009</td>
<td>NR</td>
<td>USA</td>
<td>National survey US population</td>
<td>Multicentre – national phone survey</td>
<td>845</td>
<td>NR</td>
<td>NR</td>
<td>Education level - Household income</td>
<td>Cross-sectional survey</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Niang, Leye et al. 2012</td>
<td>2010</td>
<td>Senegal</td>
<td>Residents of Dakar</td>
<td>Single centre - Dakar</td>
<td>400</td>
<td>33.58</td>
<td>43.25</td>
<td>Education level</td>
<td>Cross-sectional survey</td>
<td>72</td>
<td>51</td>
</tr>
<tr>
<td>Meng, Lim et al. 2012</td>
<td>NR</td>
<td>Singapore</td>
<td>Patients attending primary medical centres</td>
<td>Multicentre</td>
<td>1520</td>
<td>49</td>
<td>50</td>
<td>Education level - Monthly household income - Occupation</td>
<td>Cross-sectional survey</td>
<td>48</td>
<td>25</td>
</tr>
</tbody>
</table>
ii. Studies examining the socioeconomic position of commercial organ donors

<table>
<thead>
<tr>
<th>Period of data collection</th>
<th>Country</th>
<th>Sample group</th>
<th>Single centre or multicentre</th>
<th>Sample size</th>
<th>Mean Age (years)</th>
<th>% female</th>
<th>Study design</th>
<th>Study question</th>
<th>SEP of unrelated donors</th>
<th>% unrelated donors with financial motivation for donation</th>
<th>Newcasle Ottawa Scale Score (max 9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Zargooshi, 2001)²⁵</td>
<td>1989-1995</td>
<td>Iran</td>
<td>Living donors — unrelated and related</td>
<td>Single centre - Kermanshah, Iran</td>
<td>100</td>
<td>31</td>
<td>33</td>
<td>Cross-sectional survey</td>
<td>Characteristics of living donors and motivation for donation</td>
<td>[Data for all donors but 94% unrelated] 1. 29% illiterate 2. 60% less than high school education 3. 15% unemployed</td>
<td>83</td>
</tr>
<tr>
<td>(Ghods, Ossareh et al., 2001)²⁰</td>
<td>NR</td>
<td>Iran</td>
<td>NR</td>
<td>NR</td>
<td>500</td>
<td>31</td>
<td>9.8</td>
<td>NR</td>
<td>Characteristics of living unrelated donors</td>
<td>1.6% illiterate 2. 84% ‘poor’</td>
<td>NA</td>
</tr>
<tr>
<td>(Malakoutian, Hakemi et al., 2007)²⁵</td>
<td>2005-2006</td>
<td>Iran</td>
<td>Living unrelated donors</td>
<td>Multicentre</td>
<td>478</td>
<td>27</td>
<td>18</td>
<td>Cross-sectional survey</td>
<td>Characteristics of living unrelated donors and motivation for donation</td>
<td>1. 29% unemployed 2. 2.7% illiterate. 3. 62% living below World Bank poverty line ($US2 per day)</td>
<td>56</td>
</tr>
<tr>
<td>(Khajedehi, 1999)²⁵</td>
<td>NR</td>
<td>Iran</td>
<td>Living donors – unrelated and related</td>
<td>Single centre - Shiraz, Iran</td>
<td>78</td>
<td>NR</td>
<td>59</td>
<td>Cross-sectional survey of living donors</td>
<td>Characteristics of living donors and motivation for donation</td>
<td>1. 58% illiterate 2. 32% abusing drugs 3. 45% unemployed 4. 55% urgently needing money</td>
<td>55</td>
</tr>
<tr>
<td>(Beladi Mousavi, Alemzadeh, 2008-2009)²⁵</td>
<td>2008-2009</td>
<td>Iran</td>
<td>Living donors – unrelated and related</td>
<td>Single centre - Ahvaz, Iran</td>
<td>210</td>
<td>28</td>
<td>20.5</td>
<td>Cross-sectional survey of living donors</td>
<td>Characteristics of living donors and motivation</td>
<td>1. 9.5% illiterate 2. 7.1% abusing drugs</td>
<td>82</td>
</tr>
</tbody>
</table>
### iii. Studies examining the socioeconomic position of non-commercial living organ donors and recipients

<table>
<thead>
<tr>
<th>Period of data collection</th>
<th>Country</th>
<th>Sample group</th>
<th>Sample size</th>
<th>Mean Age (years)</th>
<th>% female</th>
<th>Study design</th>
<th>Study question</th>
<th>Marker of SEP</th>
<th>Comment/Findings</th>
<th>Newcastle Ottawa Scale Score (max 9)</th>
<th>Selection</th>
<th>Comparability</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>India</td>
<td>Commercial living kidney donors ie donors who had sold a kidney</td>
<td>305</td>
<td>35</td>
<td>71</td>
<td>Cross-sectional survey</td>
<td>Characteristics of commercial living donors and motivation for donation</td>
<td></td>
<td>1. 2.7 mean years of education 2. 71% income below poverty line</td>
<td>96</td>
<td>3</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>(Goyal, Mehta et al. 2002)</td>
<td>2001-2002</td>
<td>Commercial living kidney donors ie donors who had sold a kidney</td>
<td>NA</td>
<td>32</td>
<td>NR</td>
<td>Qualitative - ethnographic interviews and survey</td>
<td>Characteristics, motivations, experiences of commercial donors</td>
<td></td>
<td>1.Education: 91% illiterate.</td>
<td>94</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>(Moazam, Moazam Zaman et al. 2009)</td>
<td>2007</td>
<td>Commercial living kidney donors ie donors who had sold a kidney</td>
<td>NA</td>
<td>311</td>
<td>NR</td>
<td>Qualitative - ethnographic interviews and survey</td>
<td>Characteristics, motivations, experiences of commercial donors</td>
<td></td>
<td>1.Employment: 23.2% unemployed</td>
<td>68</td>
<td>3</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

**Studies examining the socioeconomic position of non-commercial living organ donors and recipients**

- SEP = socioeconomic position, NR = Not reported;
<table>
<thead>
<tr>
<th>Study Ref.</th>
<th>Year Range</th>
<th>Country</th>
<th>Participants</th>
<th>Study Design</th>
<th>Study Population</th>
<th>Analysis</th>
<th>Key Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gore, Singer et al. (2010)</td>
<td>1997-2007</td>
<td>USA</td>
<td>Living kidney transplant donor and recipient pairs - USA</td>
<td>Multicentre (United Network for Organ Sharing)</td>
<td>51057 pairs</td>
<td>Retrospective ‘cohort’ study</td>
<td>United Network for Organ Sharing database analysis. What are the differences in SEP of donors and recipients? Validated composite index of the SEP characteristics of the ZIP code of residence for donor and recipient from 2000 US census files. No large discrepancies between the SEP of living unrelated renal transplant donors and their recipients. Being in a LURT pair was associated with higher odds of having a large donor-recipient SEP difference among white recipients (compared with African Americans, and Hispanics) and those recipients with at least some college education (compared with those with less than a high school education and high school-educated recipients).</td>
</tr>
<tr>
<td>Bailey, Tomson et al. (2013)</td>
<td>2001-2010</td>
<td>UK</td>
<td>Living kidney transplant donor and recipient pairs - England</td>
<td>Multicentre (England)</td>
<td>4653 pairs</td>
<td>Retrospective ‘cohort’</td>
<td>Do living donor-recipient relationships differ with different levels of socio-economic deprivation in the white population of England? Postcode derived area level index of Multiple Deprivation score of recipient Sources of living kidney transplants differed with deprivation (p &lt; 0.001). Recipients living in poorer areas were more likely to receive a kidney from a sibling, child, and “other relative” donor and less likely from spouses/partners.</td>
</tr>
</tbody>
</table>
iv. Studies examining the national economic climate and living kidney donation

a=SEP=socioeconomic position, b=NR=Not reported;

<table>
<thead>
<tr>
<th>Period of data collection</th>
<th>Country</th>
<th>Sample group</th>
<th>Sample size</th>
<th>Mean age (years)</th>
<th>Study design</th>
<th>Study question</th>
<th>Marker of SEP</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Muzaale, Berger et al. 2011)</td>
<td>USA</td>
<td>Living kidney donors and recipients from United Network for Organ Sharing database.</td>
<td>86832</td>
<td>NR 80.2% aged 18-49</td>
<td>Retrospective cohort study.</td>
<td>What variables were independently associated with the attrition of the live kidney donor pool in the USA between 2004 and 2008?</td>
<td>Donor ZIP code census data median household income.</td>
<td>Living kidney donation attrition was independently associated with donor income (aOR 1.17 p&lt;0.001 ie 17% more attrition in those with lower incomes).</td>
</tr>
<tr>
<td>(Lynch, Mathur et al. 2011)</td>
<td>USA</td>
<td>Combined analysis of the Scientific Registry of Transplant Recipients and the Index of Consumer Expectations as a marker of financial/economic instability.</td>
<td>NR</td>
<td>NR</td>
<td>Ecological study. Combined analysis of the Scientific Registry of Transplant Recipients and the Index of Consumer Expectations as a marker of economic confidence/stability.</td>
<td>Is there a link between economic instability and the decision to become a living kidney donor?</td>
<td>Index of Consumer Expectations – marker of economic confidence/stability.</td>
<td>Living related transplantation rates correlated directly with the Index of Consumer Expectations but living unrelated transplant rates demonstrated an inverse relationship. Variability in donation with the Index of Consumer Expectations was most pronounced among the poorest recipients.</td>
</tr>
</tbody>
</table>

v. Studies examining a possible interaction of socioeconomic position with ethnicity and gender

a=SEP=socioeconomic position, b=NR=Not reported; italics = qualitative studies

<table>
<thead>
<tr>
<th>Period of data collection</th>
<th>Country</th>
<th>Sample group</th>
<th>Sample size</th>
<th>Mean Age (years)</th>
<th>% female</th>
<th>Study design</th>
<th>Study question</th>
<th>Marker of SEP</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Gill, Dong et al. 2013)</td>
<td>USA</td>
<td>Living kidney donors reported to the Organ</td>
<td>57896</td>
<td>NR</td>
<td>Retrospective ‘cohort’ study</td>
<td>What is the relationship between living</td>
<td>Donor ZIP code census data median</td>
<td>The incidence of living kidney donation was higher in the African-American population than in the</td>
<td>Selection=4 Comparability=2</td>
</tr>
<tr>
<td>Study</td>
<td>Year</td>
<td>Country</td>
<td>Study Design</td>
<td>Study Setting</td>
<td>Sample Size</td>
<td>Sample Characteristics</td>
<td>Methods</td>
<td>Findings</td>
<td>Notes</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
<td>---------</td>
<td>--------------</td>
<td>---------------</td>
<td>-------------</td>
<td>------------------------</td>
<td>---------</td>
<td>----------</td>
<td>-------</td>
</tr>
<tr>
<td>Zimmerman, Donnelly et al. 2000</td>
<td>1991-1996</td>
<td>Canada</td>
<td>First-degree relatives and spouses (i.e. potential living donors) of renal transplant recipients of Toronto Hospital</td>
<td>Single centre</td>
<td>1024</td>
<td>NR</td>
<td>52.6</td>
<td>Cross-sectional telephone survey of living kidney transplant recipients regarding their potential donors.</td>
<td>Employment status of potential donors (used by authors as a ‘crude indication of the financial impact of donation on that individual’s family’)</td>
</tr>
<tr>
<td>Lin, Tasi et al. 2010</td>
<td>2005-2008</td>
<td>Taiwan</td>
<td>Potential living kidney donors (volunteers for donation undergoing assessment) at National Taiwan University Hospital</td>
<td>Single centre</td>
<td>266</td>
<td>NR</td>
<td>44.8</td>
<td>Prospective single centre cohort study. Qualitative assessment of reasons potential donors ‘unwilling’ to donate.</td>
<td>What factors influenced or prevented individuals from living kidney donation? Not formally measured—participants reported concerns regarding economic stress and financial hardship</td>
</tr>
</tbody>
</table>
vi. Legislation removing potential socioeconomic disincentives to living kidney donation

<table>
<thead>
<tr>
<th>Period of data collection</th>
<th>Country</th>
<th>Study design</th>
<th>Study question</th>
<th>Marker of SEP*</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Lavee, Ashkenazi et al. 2013)</td>
<td>2004-2011</td>
<td>Israel</td>
<td>Series of cross-sectional analyses assessing the number of living kidney transplants performed in Israel and abroad before and after the implementation of the 'Organ Transplantation Law'</td>
<td>What is the association between the implementation of the 'Organ Transplantation Law' and living kidney transplantation rates in Israel?</td>
<td>Intervention – law removed financial disincentives to living organ donation (a) earning loss reimbursed b) transport costs refunded c) cost of recuperation care at a facility reimbursed d) medical, work capability loss and life insurances reimbursed e) cost of psychological consultations reimbursed.</td>
</tr>
<tr>
<td>(Boulware, Troll et al. 2008)</td>
<td>1988-2006</td>
<td>USA</td>
<td>Series of cross-sectional analyses assessing the number of living kidney transplants performed in the USA before and after the introduction of state legislation and federal initiatives supporting donors.</td>
<td>Have changes in living kidney donation rates occurred following the introduction of state legislation and federal initiatives supporting donors?</td>
<td>Intervention – legislation authorising for donors: a) Paid leave b) Tax benefit c) Unpaid leave Other e.g. recommendation or</td>
</tr>
<tr>
<td>Assessed effect on living related (defined as relatives plus spouse/partner) vs unrelated.</td>
<td>encouragement of the above.</td>
<td>federal initiatives had no effect on overall living kidney donation rates but were associated with increases in living-unrelated donation.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Materials and methods

PICO/PEO statement

The populations of interest were:

a) Potential living kidney donors: any living individual known to a recipient who could donate a kidney to them. Altruistic living donors were excluded.

Linked to:

b) Potential living kidney transplant recipients: individuals with deteriorating CKD stage 4 or worse predicted to require, or already receiving, renal replacement therapy in any form (failing transplant, dialysis).

The exposure of interest was SEP. This term lacks a universal definition or measure but it typically incorporates economic (e.g. income), social (e.g. education) and work status (e.g. occupation) variables. This may be measured at individual and area levels – and may refer to either the potential living kidney donor or the intended recipient.

The main outcome of interest was ‘progression towards LKD. This included:

a) Volunteering for living kidney donor assessment.

b) Progression through donor evaluation to actual donor nephrectomy (or transplantation if measured by the recipient).

Thus, this review aimed to assess and summarize research examining the population of potential living kidney donors, to assess the effect of the exposure of SEP on the outcome of LKD.

Data sources and search strategy

A literature search was performed in December 2013 by the first author (PB) with support from an information scientist from the University of Bristol. The following keywords and variants were used: living, donor(s), donation, transplant(s), kidney, renal, socioeconomic, deprivation, income, finance, education.

The following electronic databases were searched: EMBASE, Medline, PsycINFO, ASSIA, CINAHL, SIGLE and the Open University Grey Literature site, Cochrane Central Register of Controlled Trials and Cochrane review database, Centre for Reviews and Dissemination York, and the British Library Electronic Theses Online Service (EthOS). Details for each database are provided in ‘SDC Detailed search strategies.’

Additional reference list searches were performed and three authors provided further data information: Dr L. Ebony Boulware, Dr Giorgina Piccoli and Associate Professor Margareta Sanner.

Study selection

Abstract only and non-English language articles were included.

Studies exclusively looking at deceased organ donation, paediatric organ recipients, non-kidney donation, living-donor transplant recipients or non-socioeconomic variables were excluded. Studies examining the effect of LKD on the SEP of donors were excluded. Non-primary research articles were excluded. Quantitative and qualitative studies, abstract-only and non-English language articles were included.

Data extraction and quality assessment

The quality of the studies was assessed using the Newcastle-Ottawa Scale (84) (SDC Newcastle-Ottawa Scales). The NOS is a tool for the quality assessment of non-randomised studies included in systematic reviews. Studies are scored out of a maximum of nine according to the selection and comparability of study groups, and the ascertainment of the exposure/outcome.
The content screening of search findings and detailed review of the full-text papers were performed by the first author (PB). An independent subset analysis of a random sample of studies, including data extraction and quality assessment, was performed by a second reviewer (SR) for validity. Any disagreements regarding interpretation of findings or assessment of quality were discussed and a unanimous decision reached.

Data synthesis and analysis

Thirty-three suitable studies were identified and a decision was made to include a description of all original articles. The studies were combined according to the research question and the point on the living kidney donor pathway that was examined. Overall, a narrative descriptive review was performed because of the wide heterogeneity of the studies.

It was felt that the data from nine studies examining the attitudes of hypothetical living kidney donors towards donation might be appropriately combined into a meta-analysis, performed using Stata 13. Data was extracted from these studies to populate a 2x2 table of a binary SEP exposure variable (high vs low) against a binary attitude outcome variable of being 'willing to donate' or 'not willing to donate'. All those reported as 'undecided' were classed as 'not willing to donate'. We dichotomized any ordinal variables at the point the same variable had been dichotomized for other studies. For example, education was dichotomized with 'secondary education or higher' classed as higher SEP. A random effects meta-analysis was performed, as we presumed, a priori, there would be marked heterogeneity by study population and by how exposure and outcomes were measured. This assumption was checked by examining the $I^2$ statistic of the pooled absolute differences in the proportion of individuals who reported willingness to be a living kidney donor by SEP.

A sensitivity analysis was performed with the highest quality studies. Results were stratified by intended recipient of the hypothetical transplant.

The following electronic databases were searched: EMBASE (1974 to week 51 2013), Medline (1950 to present including in process week 51 2013), PsycINFO (1987 to Dec Week 4 2013), ASSIA (1681 to 2013), CINAHL (1976 to week 51 2013), SIGLE and the Open University Grey Literature site, UK Clinical Research Network (UKCRN), Cochrane Central Register of Controlled Trials and Cochrane review database, Centre for Reviews and Dissemination York, and the British Library Electronic Theses Online Service (EthOS).

The following electronic databases were searched with the search strategy and results detailed:

**EMBASE (1974 to week 51 2013), Medline (1950 to present including in process week 51 2013), PsycINFO (1987 to Dec Week 4 2013)**

1. (live or living).ti,ab. = 761865
2. (donor* or donation or donate*).ti,ab. = 538222
3. ((live or living) adj3 (donor* or donation or donate*)).ti,ab. = 30702
4. or/1-3 = 1259229
5. transplant*.ti,ab. = 804914
6. (depriv* or deprivation).ti,ab. = 155031
7. Socioeconomic deprivation.ti,ab. = 1410
8. (socioeconomic or socio-economic or social or socio or economic).ti,ab. = 1481036
9. ((socioeconomic or socio-economic or social or socio of economic) adj2 (depriv* or deprivation)).ti,ab. = 4094
10. Social class.ti,ab. = 20187
11. (IMD or index of multiple deprivation).ti,ab. = 3021
12. (income or finance*).ti,ab. = 180808
13. (education or educat*).ti,ab. = 1095434
14. or/6-13 = 2591760
The search strategy used several features of OVID OSP to capture all possible articles and to exclude those that were inappropriate. The symbol ‘*’ was used as a truncation symbol following a term to capture all variations of endings for that term (e.g. don* would capture donor, donors, donation); ‘adj’ was used as a proximity operator and ‘adj3’ denotes terms are within 3 words or each other; ‘ti,ab’ denotes searching in the title and abstract. The Boolean operators OR, AND and NOT were used to combine results of the searches. All abstracts for the results of step 22 were screened in order to capture research published in abstract form only (oral or poster presentation).

Applied Social Sciences Index and Abstracts - ASSIA

[encompassing databases: Australian Education Index (1977 to Week 52 Dec 2013), British Education Index (1975 to Week 52 Dec 2013), ERIC (1966 to Week 52 Dec 2013), International Bibliography of the Social Sciences (IBSS) (1951 to Week 52 Dec 2013), MLA International Bibliography (1926 to Week 52 Dec 2013), Periodicals Archive Online, PILOTS: Published International Literature On Traumatic Stress (1871 to Week 52 Dec 2013), ProQuest Dissertations & Theses: UK & Ireland, Social Services Abstracts (1979 to Week 52 Dec 2013), Sociological Abstracts (1952 to Week 52 Dec 2013)]

1. ab(live or living) = 142027
2. ab(donor* or donat*) = 15594
3. ab(depriv* or deprivation or socioeconomic deprivation or socioeconomic or social class or social or economic or IMD or index of multiple deprivation or income or finance* or education or poverty or poor) = 1502548
4. ab(kidney or renal) = 3905
5. ab(liver) = 4209
6. ab(paed* or pediat*) = 5105
7. 1 AND 2 = 519
8. 1 AND 2 AND 4 = 72
9. 1 AND 2 AND 3 = 241
10. 1 AND 2 AND 3 AND 4 = 29
11. 10 NOT 5 = 28
12. 11 NOT 6 = 28 results

After content review – 5 papers potentially relevant and not already identified from OVIDSP search.

The search strategy used several features of ASSIA to capture all possible articles and to exclude those that were inappropriate. The symbol ‘*’ was used as a truncation symbol following a term to capture all variations of endings for that term (e.g. don* would capture donor, donors, donation); ‘ab’ denotes searching in the abstract. The Boolean operators OR, AND and NOT were used to combine results of the searches.
Cumulative Index to Nursing and Allied Health – CINAHL

1. AB (live or living) = 42876
2. AB (donor* or donat*) = 7218
3. AB (depriv* or deprivation or socioeconomic deprivation or socioeconomic or social class or social or economic or IMD or index of multiple deprivation or income or financ* or education or poverty or poor) = 213503
4. AB (kidney or renal) = 21782
5. AB (liver) = 10782
6. AB (paed* or pediat*) = 26520
7. 1 AND 2 = 612
8. 1 AND 2 AND 4 = 267
9. 1 AND 2 AND 3 = 142
10. 1 AND 2 AND 3 AND 4 = 76
11. 10 NOT 5 = 71
12. 11 NOT 6 = 71 results

No new studies were identified when compared to those identified by the initial OVID SP search.

System for Information on Grey Literature in Europe – SIGLE and the Open University Grey Literature site

No article examining living kidney donation and socioeconomic variables was identified.

Cochrane Central Register of Controlled Trials and Cochrane review database

Title, abstract, keywords: (live or living)
AND
Title, abstract, keywords: (kidney or renal)
AND
Title, abstract, keywords: (donor* or donat*)
AND
Title, abstract, keywords: (socioeconomic or economic or deprivation or education or poverty) 15 results identified.

Of the 15 results identified, no study was found that had not already been identified in the initial OvidSP.

Centre for Reviews and Dissemination York

Any field: (live or living) AND (kidney or renal)
AND
Any field: (deprivation or economic or socioeconomic)
AND

Title: (donor* or donation* or donat*)

22 hits and 2 possibly relevant papers re. commercialization of LKTx.

British Library EThOS: Electronic Theses Online Service

The searches ‘living kidney donor(s)’, ‘living kidney transplant(ation)’ and ‘deprivation AND transplant(ation)’, ‘deprivation AND renal’, ‘deprivation AND kidney’ revealed only one potentially relevant thesis:

‘Social deprivation, ethnicity and renal replacement therapy in England and Wales: Equity of access and outcomes – Udaya Udayaraj’.

However assessment of this thesis reveals there is no assessment of the relationship between living kidney donation and deprivation.

UK Clinical Research Network - UKCRN

At the time of literature review in December 2013, there was only one study registered regarding ‘living kidney donor(s)’ or ‘living kidney transplant(ation)’. This study was the one designed by the authors to address the issues raised by this systematic review:

UKCRN ID. 15716 Deprivation and non-progression of potential living kidney donors

- From potential donor to actual donation: how does socio-economic deprivation affect the recruitment and progression of living kidney donors? A quantitative-qualitative mixed methods observational study.
SDC Newcastle-Ottawa Scales - tool for quality assessment

Case-control studies

Selection (select one from each section)

1. Is the case definition adequate?
   A) yes, with independent validation *
   B) yes, eg record linkage or based on self reports
   C) no description

2. Representativeness of the cases
   A) consecutive or obviously representative series of cases *
   B) potential for selection biases or not stated

3. Selection of Controls
   A) community controls *
   B) hospital controls
   C) no description

4. Definition of Controls
   A) control well defined *
   B) no description of source

Comparability (select a maximum of two)

1. Comparability of cases and controls on the basis of the design or analysis
   A) study controls for age and gender *
   B) study controls for any additional factor: ethnicity *

Exposure (select one from each section)

1. Ascertainment of exposure
   A) secure record – e.g. postcode derived IMD *
B) structured interview where blind to case/control status *
C) interview not blinded to case/control status
D) written self report or medical record only
E) no description

2. Same method of ascertainment for cases and controls
A) yes *
B) no

3. Non-response rate
A) same rate for both groups *
B) non respondents described
C) rate different and no designation

Cohort studies
Selection (select one from each section)
1. Representiveness of the exposed cohort
A) truly representative of the average participant in exposed community *
B) somewhat representative of the average participant in exposed community *
C) selected group of patients eg only certain ethnicities, ages
D) no description of the derivation of the cohort

2. Selection of the non-exposed cohort
A) drawn from the same community as the exposed cohort but differing in variable of interest (e.g. socioeconomic deprivation) only *
B) drawn from a different source
C) no description of the derivation of the non-exposed cohort

3. Ascertainment of exposure
A) secure record eg IMD from post-code, ONS data *
B) structured interview eg education, finances disclosed *
C) written self report
D) other / no description

4. Demonstration that outcome of interest was not present at start of study / at time of data collection for retrospective cohort
   A) yes *
   B) no

Comparability (select a maximum of two)
1. Comparability of cohorts on the basis of the design or analysis
   A) study controls/adjusts for age, sex *
   B) study controls for any additional factors e.g. ethnicity *

Outcome (select one from each section)
1. Assessment of outcome
   A) independent blind assessment *
   B) record linkage *
   C) self report
   D) other / no description

2. Was follow up long enough for outcomes to occur?
   A) yes (select an adequate follow up period for outcome of interest) OR end-point reached before then *
   B) no

3. Adequacy of follow up of cohorts
   A) complete follow up: all subjects accounted for *
   B) subjects lost to follow up unlikely to introduce bias: number lost ≤20% or description of those lost suggesting no different from those followed *
   C) follow up rate <80% and no description of those lost
   D) no statement
Cross-sectional studies

Selection (select one from each section)

1. Representativeness of the sample
   A) Truly representative of the average in the target population. * (all subjects or random sampling)
   B) Somewhat representative of the average in the target population. * (non-random sampling)
   C) Selected group of users.
   D) No description of the sampling strategy.

2. Sample size
   A) Justified and satisfactory. *
   B) Not justified.

3. Non-respondents
   A) Comparability between respondents and non-respondents characteristics is established, and the response rate is satisfactory. *
   B) The response rate is unsatisfactory, or the comparability between respondents and non-respondents is unsatisfactory.
   C) No description of the response rate or the characteristics of the responders and the non-responders.

4. Ascertainment of the exposure (risk factor)
   A) Validated measurement tool. *
   B) Non-validated measurement tool, but the tool is available or described.*
   C) No description of the measurement tool.

Comparability (select a maximum of two)

1. The subjects in different outcome groups are comparable, based on the study design or analysis. Confounding factors are controlled.
   A) The study controls for the most important factor (select one). *
   B) The study control for any additional factor. *

Outcome (select one from each section)

1. Assessment of the outcome:
A) Independent blind assessment. **
B) Record linkage. **
C) Self report. *
D) No description.

2. Statistical test:
A) The statistical test used to analyze the data is clearly described and appropriate, and the measurement of the association is presented, including confidence intervals and the probability level (p value). *
B) The statistical test is not appropriate, not described or incomplete.

This scale has been adapted from the Newcastle-Ottawa Quality Assessment Scale for cohort studies to perform a quality assessment of cross-sectional studies for this systematic review.