Psychosocial health of living kidney donors: a systematic review


CRD summary
The authors concluded that, for most living kidney donors, psychosocial health appears unchanged, or improved, by donation. The reliability of the authors’ conclusions is unclear given some methodological concerns about the review process, uncertainly regarding study quality, and variable reporting of the results.

Authors' objectives
To assess the impact of living kidney donation on a donor’s psychosocial health.

Searching
MEDLINE, EMBASE, Web of Science, PsycINFO, Sociological Abstracts and CINAHL were searched from 1969 to July 2006; the search terms were reported. Related articles in PubMed, along with the reference lists of review articles and all included studies, were searched for additional studies. Inclusion was restricted to studies reported in English.

Study selection
Study designs of evaluations included in the review
Studies involving survey designs were eligible for inclusion in the review.

Specific interventions included in the review
Studies assessing donation outcomes following nephrectomy were eligible for inclusion. Operative methods included laparoscopic donors and those who received an open nephrectomy.

Participants included in the review
Studies of 10 or more kidney donors after nephrectomy were eligible for inclusion. Studies of for-profit kidney vendors were excluded. The average time since donation was 4 years (range: 1 week to 37 years), the mean age at donation was 42 years, and 61% of the donors were female. Donors comprised parents, siblings, spouses and children of the recipients. The control groups included non-donors from diverse population groups.

Outcomes assessed in the review
Studies examining psychological and psychosocial functioning, assessed by questionnaire, were eligible for inclusion. The main outcomes assessed were social function, self-concept, body image, psychological well-being and quality of life. A variety of questionnaires were used across the studies, including the Short-Form 36 health survey and the Beck Depression Inventory. In addition, investigator-developed questionnaires were used in the majority of studies.

How were decisions on the relevance of primary studies made?
The authors did not state how the papers were selected for the review, or how many reviewers performed the selection.

Assessment of study quality
Study quality was assessed in terms of the provision of demographic information, follow-up of the participants, survey response rate, reasons for incomplete response, and follow-up of nonresponders. Two reviewers extracted data on the methods.

Data extraction
Two reviewers independently extracted the data from the included studies. The outcomes were reported in a descriptive style, largely as proportions or percentages.

Methods of synthesis
How were the studies combined?
The studies were combined in a narrative.
How were differences between studies investigated?
Differences in some study characteristics were presented in a table and discussed in the text.

Results of the review
Fifty-one studies were included in the review, 10 of which were prospective studies. The included studies contained 5,139 donors, with sample sizes ranging from 12 to 536 donors.

Fourteen studies were insufficiently reported in terms of demographic information. The response rate could not be calculated for 9 studies. Where reported, the response rate averaged 71% (range: 33 to 95). Reasons for incomplete response were available for 20 studies, 11 studies collected information on nonresponders, and 5 studies compared responders with nonresponders.

Social function.
Twenty-five studies assessed the quality of a donor’s relationship with their recipient, spouse, non-recipient children and family members after donation. Relationships were unchanged or improved with recipients (for 86 to 100% of donors; 15 studies); in marital relationships with spousal and non-spousal donors (for 82 to 98% of donors; 5 studies); in relationships between spousal or parental donors and their non-recipient children (for 95 to 100% of donors; 2 studies); and in terms of general family relationships (for 83 to 100% of donors; 4 studies).

Self-concept and body image.
Eighteen studies assessed self-concept, with six reporting that donors experienced an increase in self-esteem or self-worth after donating (no results were available). Ten studies assessed the donors’ perception of their physical appearance and their nephrectomy scar after donation; 4 studies reported that these did not present a problem with body image (results were available for 2 studies).

Psychological well-being.
Thirty-six studies looked at the emotional well-being of donors after nephrectomy. In 5 studies, 77 to 95% of donors experienced no depression following donation (there was some discrepancy between the tabulated results and those reported in the text). Two studies found that 86 to 94% of donors did not suffer from anxiety following donation.

Quality of life.
Quality of life was considered in 29 studies, 22 of which used versions of the Short-Form health survey. In 17 of these studies donor scores were reported to be similar to, or better than, the general population (no results were available).

A small number of adverse effects were noted in the areas of body image, psychological well-being and quality of life (details were given in the paper). Further analyses on stress and other psychiatric symptoms were also reported.

Authors’ conclusions
The psychosocial health of most donors appears unchanged or improved by donation. The proportion who experience negative outcomes would appear to be small, and the majority of donors reported that they would repeat the experience.

CRD commentary
The review question was clear and was supported by appropriate inclusion criteria relating to the participants, intervention, study design and outcomes. Attempts were made to identify all the relevant literature by searching several electronic databases and reference lists, but the restriction to publications in English might have introduced language bias. It appears that the review was conducted with some efforts to minimise error and bias, but the methods applied at the study selection stage were unclear. The use of a narrative synthesis seems appropriate given the heterogeneity of the included studies. Some studies included in the review comprised small study samples and the majority of studies were conducted retrospectively, both of which could have introduced further biases. Under-
reporting of the included studies precluded a full assessment of quality. The authors’ conclusion may be overestimated in terms of the evidence presented, and its reliability is unclear because of some methodological concerns about the review process, uncertainty regarding study quality, and the authors’ variable reporting of the results.

**Implications of the review for practice and research**
Practice: The authors stated that prospective donors should be made aware of all potential outcomes. Further long-term, multidisciplinary support is recommended, including nurse-led follow-up and early counselling.

Research: The authors stated that there is a need for large, multicentre, prospective cohort studies of sufficient duration to increase knowledge of the psychosocial implications of living kidney donation.

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