

Crossing boundaries—why community severance needs an interdisciplinary approach

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Background

Community severance (CS) occurs where road traffic (speed or volume) inhibits access to goods, services or people. CS greatly reduces the number of social contacts, thus has been assumed to lead to higher morbidity and mortality, especially among the elderly. We reviewed the literature to assess the extent of evidence on its effects on health.

Methods

A 2001 search using a combination of specified search terms, of Medline, BIDS International Bibliography of the Social Sciences, Embase, Sociological Abstracts, PsycInfo and Transport Research Laboratory library was updated in March 2010 by searching for 'community severance' in PubMed and UCL's MetaLib collection of transport, planning, and engineering databases.

Results

CS cannot be quantified effectively at present. No studies explore the effects of CS on mental or physical health, nor have studies of reductions in social contacts as a result of changes in roads or traffic examined ensuing morbidity or mortality. What evidence there is indicates that traffic volume and speed interfere with normal activities and reduce social contacts; studies demonstrate that reduced social contact and access to goods and services are detrimental to health. CS particularly affects older people and children. Although <10% of participants in one study avoided activities because of reluctance to cross the main road, this increased significantly with age, including among fully mobile older people. Increasing traffic affects road traffic collisions, perceived risk of injury and subsequent curtailment of healthy behaviours. Children, in particular, experience greater restriction on their independent mobility, affecting levels of physical activity and, consequently, obesity.

Conclusions

It is likely, but unproven, that CS adversely affects health and well-being. CS would reduce with spatial planning and transport policies that encourage modal shift from car use. Robust interdisciplinary methods to measure the health impact of residential CS need to be developed urgently.