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Review Paper

An overview of systematic reviews on the public health consequences of social isolation and loneliness

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ABSTRACT

Objectives: Social isolation and loneliness have been associated with ill health and are common in the developed world. A clear understanding of their implications for morbidity and mortality is needed to gauge the extent of the associated public health challenge and the potential benefit of intervention.

Study design: A systematic review of systematic reviews (systematic overview) was undertaken to determine the wider consequences of social isolation and loneliness, identify any differences between the two, determine differences from findings of non-systematic reviews and to clarify the direction of causality.

Methods: Eight databases were searched from 1950 to 2016 for English language reviews covering social isolation and loneliness but not solely social support. Suitability for inclusion was determined by two or more reviewers, the methodological quality of included systematic reviews assessed using the a measurement tool to assess systematic reviews (AMSTAR) checklist and the quality of evidence within these reviews using the grading of recommendations, assessment, development and evaluations (GRADE) approach. Non-systematic reviews were sought for a comparison of findings but not included in the primary narrative synthesis.

Results: Forty systematic reviews of mainly observational studies were identified, largely from the developed world. Meta-analyses have identified a significant association between social isolation and loneliness with increased all-cause mortality and social isolation with cardiovascular disease. Narrative systematic reviews suggest associations with poorer mental health outcomes, with less strong evidence for behavioural and other physical

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health outcomes. No reviews were identified for wider socio-economic or developmental outcomes.

Conclusions: This systematic overview highlights that there is consistent evidence linking social isolation and loneliness to worse cardiovascular and mental health outcomes. The role of social isolation and loneliness in other conditions and their socio-economic consequences is less clear. More research is needed on associations with cancer, health behaviours, and the impact across the life course and wider socio-economic consequences. Policy makers and health and local government commissioners should consider social isolation and loneliness as important upstream factors impacting on morbidity and mortality due to their effects on cardiovascular and mental health. Prevention strategies should therefore be developed across the public and voluntary sectors, using an asset-based approach.

Introduction

Alone and feeling sick: do isolation and loneliness carry specific risks to health? In populations throughout the world, social isolation (defined as an objective lack of interactions with others or the wider community) and loneliness (defined as the subjective feeling of the absence of a social network or a companion) are common. Surveys in Europe and the USA estimate the prevalence of loneliness ranges from 5% to 43% in the elderly,[1–4] with similar figures for China.[5] While loneliness may be more common in the elderly, it also affects younger age groups.[6] Precise estimates for the prevalence of loneliness and social isolation are difficult to obtain due to variation across the life course; cultural and gender differences with respect to how prepared individuals are to talk about them from a personal perspective and the use of many different measurement scales, some of which are based on self-report questionnaires while others involve more objective assessment of social contact or networks (or a combination of both).

Loneliness and social isolation have both been associated with ill health, but determining causality is difficult as much of the research in this area involves observational studies. Researchers have primarily focused on the association with mortality, mental and cardiovascular health. Biological pathways have been suggested as an explanation for the effect of loneliness and social isolation on health including reduced levels of protective hormones leading to adverse effects on heart rate, blood pressure and the repair of blood vessel walls; downregulation of the immune system and neuroendocrine dysregulation from a paucity or poor quality of sleep.[7–10] Lonely individuals may be more likely to initiate harmful health behaviours such as smoking, excess alcohol consumption, overeating or transient sexual encounters as a psychological relief mechanism. They may then go on to maintain these harmful behaviours if they are less exposed to healthy behavioural norms or have less access to health advice as a result of fewer social contacts.[7,11] While social networks of friends and family can support healthy behaviours, they may also allow unhealthy behaviours to become normative.[12] Stress responses as a result of perceived social isolation can adversely precondition the neuroendocrine system, with genetic differences determining the degree to which this might occur.[13] Socially isolated individuals may suffer more stress than others due to their lack of social networks and support, and when they do, they might be more likely to withdraw into themselves.[7]

Although the exact causal pathways remain unclear, given the prevalence of social isolation and loneliness, it is important to have a clear understanding of their consequences to the individual and society. The evidence base on the impact of social isolation and loneliness has expanded over recent decades and now includes many reviews with different health foci. To provide decision-makers with the evidence they need to assess and tackle the public health challenge associated with weaker social relationships, we conducted an overview of reviews on the health implications of loneliness and social isolation. Our aims were to provide a clear summary of the evidence on the wider consequences of social isolation and loneliness based on systematic principles; identify any differences from findings of the many non-systematic reviews that have been published; clarify the direction of causality; and determine whether there are clear differences in consequences observed for the perceived state of loneliness vs the objective state of social isolation.

Methods

Methodology for this overview followed recognised guidance for conducting systematic overviews.[14,15] The following databases were searched from 1950 to March 2016: Web of Knowledge; SCOPUS; EMBASE; ASSIA; Medline; PsycINFO; Campbell Collaboration and Database of Abstracts of Reviews of Effects, using the terms social environment; social isolation; social vulnerability; social engagement; loneliness and psychosocial support.

Systematic reviews (including narrative reviews and meta-analyses) written in English were included. Well researched (as judged by two reviewers) non-systematic reviews were also included for a comparison of findings but not as part of the primary synthesis. Reviews of interest were those that contained studies of individuals from any population of any age or gender, where any health or socio-economic outcome as a result of social isolation or loneliness was studied. For the