



Factors that are Associated with Malnutrition in Vulnerable Populations from Economically Developed Countries: A Narrative Synthesis of a Systematic Review

K. Kimber^{1*} and C. Baldwin²

¹ Department of Nutrition and Dietetics, King's College London, London, SE1 9NH, UK.

² Nutritional Sciences Division, King's College London, London, SE1 9NH, UK.

Authors' contributions

This work was carried out in collaboration between both authors. Author KK designed the study, performed the search, performed the analysis, wrote the protocol, and wrote the first draft of the manuscript. Author CB provided guidance and assistance throughout all sections, and read and approved the final manuscript.

Conference Abstract

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ABSTRACT

Background: Malnutrition is frequently managed by healthcare professionals without dietetic training using care pathways, with referral to a Dietitian occurring in patients who fail on first line treatments. A better understanding of the factors associated with malnutrition could help prioritise patients who would benefit from early referral to a Dietitian. This systematic review aimed to identify the risk factors for malnutrition, in vulnerable populations, from economically developed countries in a variety of settings.

Methods: A systematic review was undertaken through electronic database searching (MEDLINE, CINAHL, EPPI Centre, Cochrane Library), hand searching references of included studies and review papers, and contact with a knowledgeable expert in the field. The last database search was conducted on 12th October 2012. The inclusion criteria were; observational studies published in English, participants who were elderly, frail or vulnerable, living in either hospitalised, institutionalised, or community settings of more economically developed countries, with either chronic illness, and with or at risk of malnutrition. A narrative synthesis was conducted, relying primarily on words and text to summarise and explain findings, a technique most suitable where numbers are

*Corresponding author: Email: katherine.kimber@kcl.ac.uk, kat_kimber@hotmail.co.uk;

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unavailable Rodgers et al [1]. Study quality was assessed using the STROBE statement von Elm et al [2].

Results: A total of 5273 titles were screened, of which 302 abstracts were examined further. 119 studies meeting the inclusion criteria were divided in broad categories. Nine categories, associated with risk of developing malnutrition, were identified; age (n=15), social (n=57), dental/oral (n=24), gender (n=7), perceived health (n=16), polypharmacy (n=15), psychological/cognitive (n=32), diseases/health status (n=37), and food/catering (n=19). Due to time constraints, 2 categories, polypharmacy and perceived health were selected for analysis, consisting of 20 studies. Polypharmacy, considered to be more than 2-3 medications, is likely associated with an increased risk of malnutrition, in the community and institutional settings, in those aged >55 years. Poor perceived health is likely associated with an increased risk of malnutrition in the community, and hospital settings, in those aged <80 years.

Discussion: The factors identified in this review as being associated with a risk of malnutrition, were in agreement with another recent systematic review Nieuwenhuizen et al [3]. Study quality in both groups was predominantly low, due to lack of reporting of adequate detail of patient randomisation, how the study size was arrived at, and efforts to reduce bias. The findings in this review highlight the importance of identifying polypharmacy and poor perceived health. However, there is a need for further and higher quality studies in this field, as well as the analysis of the seven other categories identified in this review, in order to help manage malnutrition.

Conclusions: Polypharmacy and perceived health are factors associated with malnutrition in vulnerable populations from more economically developed countries, in a variety of settings in those aged >55 years.

Keywords: Malnutrition, undernutrition, vulnerable, frail elderly, nutritional status, polypharmacy, perceived health.

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