**Supplemental File 2: Objectives, inclusion and exclusion criteria of the studies included in this systematic literature review**

| **Reference** | **Objective** | **Inclusion criteria** | **Exclusion criteria** |
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| **Chemosensory function** |
| Duffy et al. 199533 | To investigate nutritional risk associated with olfactory dysfunction | OMFAQ score of mildly impaired or better | Diabetes mellitus |
| **Oral function** |
| Apollonio et al. 199735 | To evaluate the relationships between dental status, nutrient intake profile and mortality in a community-dwelling older people  | 70-75 years, living at home | Refusal of interview and/or dental examination, being out of town |
| Bailey et al. 200463 | To characterize the relation between self-reported oral health problems and nutritional status and to assess the relation between self-reports of mouth pain, chewing, and/or swallowing difficulties with disease status and diet in older adults. | ≥ 65 years | NR |
| Fontijn-Tekamp et al. 199641 | To study the influence of dental status on dietary intake | Born between 1913 and 1918 | NR |
| Han & Kim 201436 | To determine if denture-wearing status in edentulous South Korean elders affects their nutritional intakes | Edentulous in one or both arches | NR |
| Inomata et al. 201446 | To investigate the association of occlusal force with habitual dietary intakes in independently living older Japanese | 69–71 years, all residents living near the research venue in the urban area, and all inhabitants in the rural area | Reported energy intake <600 or >4000 kcal/d, currently receiving dietary counselling, intentional dietary change during the preceding year  |
| Iwasaki et al. 201442 | To assess whether oral health status, defined by the prevalence of posterior occluding pairs and self-reported adequacy of removable denture fit, was related to food and nutrient intake among older Japanese | Niigata citizens, aged 70 years at recruitment | Incomplete data |
| Iwasaki et al. 201640 | To investigate whether there were longitudinal associations between impaired dentition and food and nutrient intake in older Japanese | Original members of the Niigata study participating baseline and follow-up | Incomplete data |
| Kim et al. 200747 | To investigate the association between number of teeth, use of dentures and food intake and dementia | ≥ 65 years | Participants with dementia (DSM-IV) or any organic brain syndrome ascertained by Geriatric Mental States Schedule |
| Kimura et al. 201353 | To investigate the association between chewing ability and geriatric functions, as well as dietary status in the community-dwelling elderly | ≥ 75 years, agreed to undergo a comprehensive geriatric assessment | Being cared for at a hospital or a nursing home |
| Kwon et al. 201756 | To examine disparities in food and nutrition intakes among older Korean people with and without chewing difficulty | ≥ 65 years, not required to adhere to a special diet due to disease or sickness | Incomplete data |
| Lee et al. 200437 | To examine whether edentulism is associated with nutrient intake and food consumption patterns and whether there is an interaction between race and edentulism on nutritional status among well-functioning, community-dwelling elderly | No ADL difficulties and lower-extremity functional limitations, defined as difficulty walking 0.4 km or climbing 10 steps without resting | NR |
| Liedberg et al. 200451 | To evaluate mastication and food selection of older men with either fixed or removable partial dentures | Being male, born in even months in 1914, living in Malmö, ≥ 3 teeth replaced by a fixed partial denture or ≤ 7 teeth replaced by a partial removable denture  | NR |
| Liedberg et al. 200750 | To assess inadequate dietary habits, oral conditions and masticatory function | 67-68 years | NR |
| Lin et al. 201054 | To assess dietary intake of edentulous persons and the relation between chewing ability and diet | ≥ 65 years, being edentulous | NR |
| Marcenes et al. 200338 | To assess whether dental status affected older people’s food selection, nutrient intake, and nutritional status | ≥ 65 years, free living | NR |
| Marshall et al. 200248 | To describe relationships between dietary variety, nutrient intake and oral health  | ≥ 65 years | NR |
| Nordström et al. 199043 | To study dietary intake in relation to some socio-medical factors and to dental status and oral function | ≥ 70 years from Umea | Refusal of interview, incomplete dietary interview |
| Österberg et al. 198244 | To relate dental state to dietary habits and to study the possible influence of some social factors on these relations  | 70 years, dental examination, diet history interview | NR |
| Österberg et al. 200239 | To study the relationship between masticatory ability as well as dental status and intake of energy, nutrients and food items in a representative sample of 80-y olds | 80 years, living in their own homes, being not institutionalized, able to travel to the clinical examination by themselves or with assistance | NR |
| Sheiham et al. 200131,32 | To assess whether dental status is related to the intake of selected nutrients in independent-living older people | ≥ 65 years, independent living | Incomplete intake data |
| Tsai & Chang 201152 | To evaluate the possible impact of various dental prosthetic conditions on food consumption and nutritional risk | ≥ 65 years | NR |
| Woo et al. 199457 | To determine prevalence of use of dentures and chewing difficulties, and examine nutritional and health factors associated with chewing difficulties | ≥ 70 years | Information/Orientation part of the Clifton Assessment ≤ 7 |
| Yoshida et al. 201155 | To clarify the correlation between dental and nutritional status among community-dwelling elderly Japanese people | 65-85 years | History of cardiovasculardisease |
| Yoshihara et al. 200549 | To assess whether tooth loss is related to the intake of nutrients in older Japanese  | ≥ 70 years  | Refusal of interview, incomplete dietary record |
| **Cognitive function** |
| De Rouvray et al. 201465 | To describe nutritional status of older people living in Central Africa and to explore the possible link to the presence of dementia | ≥ 65 years, to be a stable resident of one of the targeted neighborhoods | Comorbidity severe enough to interfere cognitive testing |
| Shatenstein et al. 200764 | To follow the natural evolution of dietary and nutrition status among elderly community-dwelling adults with Alzheimer dementia | ≥ 65 years, having an active caregiver, speaking French or English, weight loss < 4.5 kg during the last 6 months or < 2.2 kg during the last month, early stage of probable Alzheimer dementia (DSM-IV), MMSE ≥ 22 or stage 3 or 4 on the Reisberg Scale, community-dwelling, able to provide informant consent, willing to commit a 18 months study period | Class III or more severe heart failure, COPD requiring home oxygen therapy or oral steroids, cancer treated by radiation therapy, chemotherapy or surgery in the 5 years before enrollment, inflammatory digestive disease or any other chronic illness likely to interfere with diet or participation in the study |
| **Physical function** |
| Sarti et al. 201366 | To investigate changes in body composition, diet and physical performance in healthy elderly females over a 3-year follow up | ≥ 65 years, female gender | Significant cardiovascular or pulmonary disease, uncontrolled metabolic disease, electrolyte abnormalities, cancer, inflammatory conditions, any use of drugs that might interfere body composition and resting energy expenditure |
| Bianchetti et al. 199067 | To study nutritional intake of non-institutionalized older people in relation to socioeconomic conditions and health status  | 70-75 years, living at home, inhabitants in a restricted area in the center of Brescia | Out of city or hospitalized during period of inquiry |
| **Multiple functional domains** |
| Dean et al. 200934 | To investigate the influence of resources and food-related goals on the variety of food choice among older people | ≥ 65 years, living in their own homes | NR |
| Holmes et al. 201161 | To investigate risk factors associated with poor diet quality in a low-income population | ≥ 65 years, living in their own homes, materially deprived  | NR |
| Keller et al. 199745 | To determine the independent association of a series of potentially important risk factors on dietary intake | NR | NR |
| Kwon et al. 200659 | To examine factors related to the decline of dietary variety in community-dwelling elderly people  | ≥ 65 years | Follow-up: death, missing values, hospitalization, long term absence, refusal to participate, unknown causes |
| Posner et al. 199460 | To evaluate dimensions of health and nutritional status of older Americans and associated factors  | ≥ 70 years, living at home  | Myocardial infarction or stroke within the previous 6 month, severe dementia |
| Shatenstein et al. 201358 | To identify individual and collective attributes determining global diet quality in relatively healthy community dwelling older adults | Community-dwelling, 67-84 years, in good general health, and cognitively and functionally-intact |  NR |
| Shatenstein et al. 201662 | To examine individual and collective factors as predictors of change in global diet quality of older adults  | Cognitively and functionally intact | Serious illness |

OMFAQ, Older Americans Resources and Services Multidimensional Assessment Questionnaire; NR, not reported; DSM-IV, Diagnostic and Statistical Manual of Mental Disorders IV; ADL, Activities of Daily Living; MMSE, Mini Mental State Examination; COPD, Chronic Obstructive Pulmonary Disease; 3MS, modified mini mental state examination