Proceedings of the Nutrition Society (2024), **83 (OCE2)**, E206 doi:10.1017/S0029665124004300

Winter Conference 2023, 5-6 December 2023, Diet and lifestyle strategies for prevention and management of multimorbidity

A systematic scoping review characterising studies investigating workplace nutritional interventions in male employees

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Non-communicable diseases (NCDs) are the predominant cause of death in the UK[(1)] and place an economic burden on societies[(2)]. An unhealthy diet is one of the four main behavioural risk factors for NCDs[(3)] and thus, interventions targeting dietary behaviour are of particular interest in the prevention of NCDs. The workplace may be a valuable setting for these interventions as employees represent a large proportion of the population in the UK[(4)]. In the male population, NCDs and several risk factors typically manifest at a younger age[(5)] and, additionally, males participate less in health-promoting activities[(6)].

The aim of this scoping review was to identify and characterise the evidence base to determine if a future full systematic review on nutrition interventions in the workplace to improve health and well- being in males is feasible.

The review was conducted adhering to the PRISMA guideline for Scoping Reviews[(7)]. Three electronic databases (Ovid, PubMed, and The Cochrane Library) were systematically searched for relevant publications responding to the research question from inception. No restrictions were made in the search and all study types were eligible. Articles that were not available in English were excluded from the review. Eligible studies were reviewed using a pre-defined data extraction form and references hand-searched for relevant publications. Data synthesis was focused on describing application-oriented aspects and outcome analyses were reduced to anthropometric outcomes.

Of the 1,224 publications from the initial database search, 46 were included in the review, with an additional 15 studies identified from hand-searching, resulting in 61 included reports on 57 interventions. Four main approaches to nutrition interventions at the workplace were identified; educational, environmental, individual counselling, and meal provision/replacement. Most interventions used multicomponent approaches. One of the 61 included reports followed a qualitative design. Anthropometric outcomes were reported in the majority (83.6%) of studies, followed by bioclinical outcomes (45.9%), other outcomes were food (34.4%) and nutrient intake (22.9%), smoking habits (14.8%) and, one study reported on Quality of Life. Of the studies reporting anthropometric outcomes 69% reported to be effective in improving body weight, 47.8% BMI and 54.5% waist circumference. No determinants of successful interventions such as type, duration, workplace participation were identified.

This review suggests that nutrition interventions at the workplace are effective in improving several anthropometric outcomes. A future full systematic review is feasible but should consider narrowing the research question to account for limitations in the current evidence base as differences in reporting of design, population, intervention, and outcomes severely limited data analyses. Furthermore, to enable high-quality research, the development of a reporting tool, such as the TIDieR checklist [(8)] is recommended.

Acknowledgments

I want to acknowledge the time and effort that Dr. Rachel Gibson put into this work and her support. She was an outstanding supervisor and I want to deeply thank her for everything she did for me while writing up this review and finishing my degree.

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