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## A kitchen-based cookery workshop intervention to ameliorate the fire station food environment

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Fire station food culture has contributed to an obesogenic environment at USA fire stations (1) which may be reflected in UK fire stations (2). Historically, medical assessments of overweight/obese firefighters have resulted in the prescription of physical exercise with very little consideration given to dietary modification (3). Within each firefighting team (watch) the firefighter responsible for food catering is simply nominated to be 'mess-manager' to carry out this extra duty. There is no culinary or nutrition training, with consideration for nutritional content of meals left completely in the hands of the mess-manager. This has resulted in a widespread culture of over-nutrition at fire stations and an over consumption of meals high in refined carbohydrates and saturated fat (1), (2). This study aimed to design, implement and evaluate the feasibility and efficacy of a fire station kitchen-based cookery workshop.

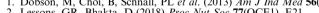
Participants were voluntarily recruited in person, by telephone and staff email in 2019. The intervention group comprised seventeen mess-managers from sixteen watches (n = 16). The control group comprised n = 13 watches whose mess-managers did not receive the intervention. The one-day practical workshop was conducted in a London Fire Brigade kitchen by a registered nutritionist on three dates during October 2019, involving two groups of six and one group of five mess-managers. Only one invited mess-manager opted out of enrolment. A nine-item food environment questionnaire was devised by the researcher to assess the quality of each watch's food environment (mess). This was administered to each watch at baseline and at four-month follow-up. Workshop content was based upon the Mediterranean diet and aimed to deliver practical demonstrations based upon transferrable concepts which could be applied to various commonly consumed fire station meals. A supplementary 33-page recipe book designed by the researcher was also given to each participating mess-manager at the end of the workshop, along with an anonymous feedback form.

Significant (p < 0.01) post-intervention improvements included eight watches reinstating smaller plates, ten watches leaving leftovers in the kitchen, eleven watches incorporating wholegrain products and eight watches switching to making sauces/soups from scratch. Non-significant (p > 0.01) improvements in other suggested environmental modifications included the introduction of a fruit bowl by two watches, low-kcal sweetener by four watches, low sugar/sodium products by six watches, and oily fish by three watches. No significant changes were reported by the control group (p > 0.01), n = 1 workshop participant reported a satisfaction rating of 8/10 with all other participants (n = 16) reporting a "perfectly satisfied" 10/10.

This is the first UK study to assess the feasibility and efficacy of a fire station kitchen-based cookery workshop. The high rate of enrolment, overwhelmingly positive participant feedback and low intensity format indicates a highly feasible intervention which showed efficacy for improving the fire station food environment.

## References





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