

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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