Short Communication

Effectiveness of a food education program in improving appetite and nutritional status of elderly adults living at home

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Objective: To evaluate a 3-week program comprising cooking demonstrations with free food samples in motivating elderly adults to cook more and improve their nutritional status. Design: An experimental pre-post study. Setting: Three districts in Hong Kong. Participants: Sixty aged 59-95 home-living adults. Intervention: Group A (one 1-day food sample given free weekly) and Group B (three 1-day food samples given free weekly). Main Outcome Measure: Satisfaction questionnaires were conducted every week. Mini Nutritional Assessment (MNA) scores were assessed at baseline and 6 months after the program's completion. Analysis: Nutritional status was assessed before and after intervention. Repeated analysis of variance measures of compliance, appetite, easiness of program at 3-week time-points were calculated to differentiate a more frequent (Group B) and a less frequent (Group A) provision of food sample reinforced their cooking skills to a greater extent. Results: The compliance rate of Group B was higher than that of Group A. More than 60% of the participants intended to continue cooking and a third of the participants expressed satisfaction with the program. The MNA scores had improved 6 months later (combined data from both groups). Conclusions: Nutrition education through cooking demonstrations and the community-based distribution of food ingredients can improve the nutrition status of the elderly population.

Key Words: appetite, evaluation research, satisfaction survey, food education program, Mini Nutrition Assessment

INTRODUCTION

The definition of malnutrition in older adults varies according to the methods used for anthropometric measurement,[1] biochemical measurement[2] and clinical screening.[3,4] In a modified Delphi study conducted by geriatricians, malnutrition was regarded as a geriatric syndrome, resulting from multiple diseases and risk factors.[5] Adequate nutrition is paramount to health, especially for older people, as reflected in the significantly increased mortality rate for malnourished patients admitted to hospital, which suggests that malnutrition is disease related.[6] Some studies have suggested that older participants with a body mass index greater than 28 have the best 3-year survival[7] and a relationship has been found between 3-year mortality and nutritional status in geriatric patients.[8] Other studies conducted in institutionalized elderly patients also indicated a relationship between the need for intensified care and frailty, and lower Mini Nutrition Assessment (MNA) scores.[9,10]

Although evidence has shown that the risk of malnutrition in elderly populations can reduce functional status, exacerbate existing medical problems, deteriorate health-related quality of life,[11] and increase the risk of respiratory and cardiac problems, infections, deep venous thrombosis, pressure ulcers, perioperative mortality and multiple organ failure,[12] the interpretations of statistical data from hospital and institutional settings have been cautious. Little information is available on the incidence or prevalence of malnutrition in elderly people who live at home because their nutritional status is rarely monitored, although reported data suggest that nearly 30% of elderly adults are at risk of malnutrition or undernourishment in developed countries[6,7] and that women have significantly lower mean MNA scores than men.[11]

Malnutrition is partly caused by financial deprivation.[13] Retirement can lead to a negative cash flow, and many retirees have not amassed savings during the course of their life. The simultaneous occurrence of illness and the expenses it engenders inevitably forces the elderly population to set priorities regarding their expenditure, and food choices are possibly compromised for financial reasons.[13] Previous findings also revealed that their cooking skills are related to their nutrient intake, and that a high percentage of elderly adults do not know how to cook.[14,15] This could possibly explain some of the social issues related to malnutrition in elderly people who live at home, and it is hypothesized that education on nutrition could increase their choice of a healthy diet and strengthen their

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enthusiasm to cook healthy food as part of their daily lives.

To educate elderly people to eat adequate nutrients, they need to be shown how to eat healthily within their limited budget. To this end, their basic cooking skills need to be strengthened to include low-cost but nutrient-rich recipes. This study aimed to evaluate a 3-week food education program for elderly adults living at home that included knowledge on nutrition, the enhancement of cooking skills to produce low-cost nutrient-rich recipes and the provision of food samples; the comments of the participants regarding their appetite were collected and assessments of their nutritional status were made before and after the intervention.

Hypothesis

A food education program that includes demonstrations of cooking methods and provides low-cost nutrient-rich food samples would facilitate an understanding of the food choices and acquisition of simple cooking skills by elderly people. Such a program would improve their nutritional status, as assessed by their MNA scores.

MATERIALS AND METHODS

Sampling

The sample included people aged 55 years or above, who lived at home alone or in a couple on a subsidized housing estate. Those who lived with carers or other family members and those who were institutionalized were excluded. Because the program aimed to impart cooking skills to the participants and required that they continue to cook for themselves, any elderly adults who had disabilities related to mobility or cognitive function were excluded.

Design

This study was based on the evaluation of two groups of elderly participants who underwent two different experimental interventions. The outcome was measured through interviews with the participants that included the administration of a satisfaction questionnaire and the pre- and post-program MNA scores assessed by registered nurses.[16-19]

Setting

The investigation was carried out in three districts in Hong Kong that were populated by elderly people. A mobile integrative health center (MIHC) was funded as a service for the elderly in Hong Kong. A database that included health records and MNA assessment scores was constructed during services provided by the MIHC, and was used to invite those who benefitted from these services to participate in the study. Because the 3-week food education program would be more effective if implemented in districts where the participants lived, three districts with a higher proportion of elderly adults were selected by convenience sampling. Thus, elderly adults who lived in the Lai King, Kowloon Bay and Sham Shui Po districts were invited to join the food education program.

Ethical considerations

The research proposal, together with the developed evaluation survey, was submitted to the Human Subjects Ethics Subcommittee of our institution for approval. The invited participants were provided with information on the study and, if they agreed to join the food education program, they were asked to sign the consent forms before the program commenced. Participants could withdraw from the program at any time without being penalized.

Instruments

The questionnaire was designed to evaluate the compliance rate, appetite and satisfaction with the 3-week food education program for all participants. Five questions evaluated the comments on a weekly basis and two evaluated the overall comments after the completion of the 3-week program.

The nutritional status of the participants was assessed using the MNA questionnaire, which was designed and validated by Guigoz et al,[16] and was specifically developed to screen protein-deficient malnutrition at a high level of sensitivity and specificity.[20] In this study, a modified Chinese version of the MNA[21] with body mass index cut-offs recommended by the World Health Organization for Asian subjects[22] was used. The maximum score of the Chinese MNA is 30, and the scoring and ranking used are the same as those used in the English. Thus, an MNA score under 17, between 17 and 23.5, and above 23.5 represent malnutrition, risk or malnutrition, and adequate nourishment, respectively.

Procedure

This study formed part of the routine services provided by the MIHC over 2 years. In three convenience-selected districts, people aged 55 years or above were invited to join the food education program. All interested participants were invited to undergo nutritional assessment conducted by registered nurses using the MNA. The first MNA assessment served as the baseline measurement.

Participants were then divided randomly into two groups: one group (Group A) was provided with a 1-day free food sample each week for 3 weeks; the other group (Group B) was supplied with three 1-day free food samples each week for 3 weeks. All took part in a 3-week food education program that included three seminars on nutrition, held by nutritionists on the Monday of each week, which covered the classification of nutrients and their function, healthy food choices and food labelling. Each seminar also included a 1-day recipe, for which the cooking steps were shown in a video and a free sample of the ingredients was given to each participant. The portion of the food sample provided was calculated on a per-capita basis and cost approximately HK$20 (equivalent to US$2.5). The size of the food sample enabled the participants to cook themselves three meals designed for breakfast, lunch and dinner on 1 day. Participants in Group B were invited to collect the same 1-day free food sample on Wednesday and Friday. Participants from Groups A and B were asked to follow the same recipe or to change the food ingredients within the same categories for the rest of the days within the week.

Telephone interviews conducted by researchers were carried out on the 7th day of each of the 3 weeks to record

the number of days of compliance, the feedback from the participants on the usefulness of the program, their understanding of the cooking instructions, the ease with which they were able to buy the ingredients, their ability to remember the cooking steps and their appetite for the suggested recipes. Additional comments were documented for further investigation. During the 3rd week, questions on their willingness to continue cooking for themselves and their overall satisfaction with the food education program were raised.

Six months after the completion of the food education program, the participants were invited to the MIHC for a further assessment of their nutritional status using MNA scores. These later MNA scores were used as the post-intervention measurements.

Outcome measurements

Demographic information including age and sex was recorded. Measurements required for the MNA assessment, such as height, body weight, mid-arm circumference and calf circumference, were taken by the registered nurses before and after the food education program. Compliance rate was recorded in terms of the number of meals that the participants prepared following the suggested recipes. Responses from the telephone interview survey were recorded as nominal scales.

Statistical analysis

Demographic data were analysed by frequency count and descriptive statistics with mean values and standard deviations to explore whether the samples in the two groups were homogeneous. In the survey evaluation, repeated analysis of variance measures were conducted for the five questions at three time-points (the end of the 1st week, the end of the 2nd week, and the end of the 3rd week) to determine whether significant differences were observed with different time episodes. Differences between pre-MNA score and post-MNA scores were compared by paired t-test to assess whether education on nutrition with demonstrations of cooking skills and the provision of food samples improved the nutritional status of the elderly participants living at home and to differentiate between a more frequent (three times per week) and a less frequent (once per week) provision of food sample reinforced their cooking skills to a greater extent.

RESULTS

Of the 94 participants invited, 60 (63.8%) agreed to join the food education program. The number of participants who completed the 1st week, 2nd week and 3rd week telephone evaluation survey was 49 (81.7%), 54 (90.0%) and 60 (100.0%), respectively. The ratio of men to women was 1:5. Although eight respondents refused to report their age, the mean age of the other respondents was 74.4 (7.8 SD) years. The youngest and oldest respondents were 59 and 95 years, respectively.

Participants were assigned randomly to Groups A and B (30 participants per group). Twelve participants chose not to undergo the MNA assessment but wished to continue participating in the food education program. Therefore, 21 participants in Group A and 27 participants in Group B underwent MNA assessment as baseline. Six months after the completion of the food education program, nine participants in Group A and 13 participants in Group B took part in the MNA assessment for the post-intervention measurement. The most common reason why the participants did not take part in the MNA assessment was the length of time required for its completion.

Compliance rate

A total of 63 meals were suggested during the 21-day period of the food education program. The median number of meals prepared in Group A was 13 (range, 3-34) and that in Group B was 23.5 (range, 4-35). Thus, the compliance rate for Group B was almost twice that of Group A.

Nutritional assessment by MNA score

Table 1 shows that most of the participants (n=42, 70.0%) were at risk of malnutrition at the time they joined the food education program. Although only half of the participants were contacted to take part in the MNA assessment 6 months after completion of the program, the proportion of participants at risk of malnutrition at that time had decreased to 18.3% (n=11) and that of participants with normal nutritional status had increased to 13.3% (n=8). In terms of the number of participants involved, this reflected that some participants had indeed improved their nutritional status after 6 months.

Using the paired sample t-test, the MNA score for Group A (n=10) increased from 21.4 to 22.3 with a correlation of 0.155 (p=0.803). The null value was contained within the 95% confidence interval using t(4)=-0.504(-5.86~4.06; p=0.641), showing that the difference between the MNA scores for pre- and post-intervention measurements was not significant. While the MNA score for Group B (n=20) increased from 17.7 to 20.1 with a correlation of 0.379 (p=0.280), the null value was not contained within the 95% confidence interval using t(9)=-2.848(-4.306~-0.494; p=0.019), indicating that the difference between MNA scores for pre- and post-intervention measurements was significant.

Evaluation of the satisfaction survey

Results from repeated analysis of variance measures within the 3-week time-points indicated positive feedback on the five designated areas on the food education program (Table 2). Regarding the usefulness of the program and the ability to understand the cooking instructions, Group B showed a higher ranking than Group A. With regard to the ease with which suggested ingredients could be bought and the ability to remember the cooking steps, Group A showed a higher ranking than Group B. A significant difference was found from the 1st week to the 3rd week for Group B in their response to remembering the cooking steps. The responses to questions on their appetite for the suggested recipes of both groups showed similar rankings of “Fair” and “Good” (Table 2).

In response to the question of whether they would like to continue to cook with the suggested recipes, Group A (n=18, 60%) and Group B (n=23, 77%) showed a strong wish to do so daily (p=0.287). With regard to their overall satisfaction with the food education program, approximately one-third of Group A (n=11, 37%) and Group B

Table 1. The nutritional status of the elderly participants assessed by the mini nutritional assessment (MNA) (number (%))

Nutritional status	Baseline MNA† (n=48)	Post-intervention MNA‡ (n=22)	*p*-value
Normal	2 (3.3)	8 (13.3)	
At risk of malnutrition	42 (70.0)	11 (18.3)	0.334
Malnutrition	4 (6.7)	3 (5.0)	

†: 12 participants refused to receive baseline MNA assessment; ‡: 38 participants refused to receive post-intervention MNA assessment.

Table 2. Repeated analysis of variance measures of responses at 3-week time-points

Food supplied	Responses to food education program over 3 weeks					
	1 day a week (n=19) Mean (SD)			3 days a week (n=27) Mean (SD)		
Evaluation items	1st week	2nd week	3rd week	1st week	2nd week	3rd week
Usefulness of the program[a]	3.05(0.78)	3.32(0.82)	3.32(0.75)	3.44 (0.58)	3.52(0.58)	3.74(0.53)
Change from 1st week	---	-0.263±0.19	-0.263±0.23	---	-0.074±0.14	-0.296±0.14
Change from 2nd week	---	---	0.0	---	---	-0.222±0.13
Understanding of cooking instructions[b]	2.68(0.48)	2.89(0.46)	2.79(0.42)	2.70 (0.61)	2.89(0.32)	2.89(0.32)
Change from 1st week	---	-0.210±0.16	-0.105±0.13	---	-0.185±0.12	-0.185±0.12
Change from 2nd week	---	---	0.105±0.11	---	---	0.0±0.08
Ease of buying ingredients[c]	4.47(0.77)	4.37 (0.90)	4.16(0.90)	4.00 (0.62)	4.07(0.55)	4.07(0.68)
Change from 1st week	---	0.105±0.23	0.316±0.24	---	-0.074±0.12	-0.074±0.13
Change from 2nd week	---	---	0.211±0.23	---	---	0.0±0.12
Remembering cooking steps[c]	4.00(1.05)	4.00(1.00)	4.11(0.81)	3.67 (0.92)	3.93(0.68)	4.04(0.76) †
Change from 1st week	---	0.0±0.30	-0.105±0.23	---	-0.259±0.16	-0.370±0.14†
Change from 2nd week	---	---	-0.105±0.19	---	---	-0.111±0.13
Appetite for suggested recipes[a]	3.32(0.89)	3.58(0.77)	3.58(0.69)	3.48 (0.51)	3.33(0.73)	3.63(0.57)
Change from 1st week	---	-0.263±0.19	-0.263±0.15	---	0.148±0.15	-0.148±0.10
Change from 2nd week	---	---	0.0±0.15	---	---	-0.296±0.14

[a]: 1=bad, 2=poor, 3=fair, 4=good, 5=excellent; [b]: 1=did not understand, 2=fair, 3=understood; [c]: 1=very difficult, 2=difficult, 3=fair, 4=easy, 5=very easy. † $p<0.05$ between week 1 and week 3.

(n=11, 38%) gave rankings of "good" and "excellent" (p=0.854).

DISCUSSION

Elderly citizens who live independently at home on accrued savings and few government subsidies tend to avoid unnecessary spending to maintain a certain level of reserves for emergencies. They therefore choose low-cost dietary provisions, such as preserved, prepackaged food, decaying, outdated and even discarded food. In general, these food options have lower nutritional value. Preserved and prepackaged foods usually contain high levels of cholesterol, saturated fatty acids, sodium and sugar, and are unhealthy for elderly adults, whereas decaying, outdated and discarded foods carry microbial contaminants, which are a major hazard for food poisoning.

With a limited knowledge of nutrition, elderly adults have few possibilities of choosing healthy, fresh food ingredients, and some may consider that cooking is difficult and too troublesome and therefore choose foods or meals that are easy to prepare. For these reasons, their food choices are usually limited and the variety in their nutrients is minimal, which could possibly be the basis for the high percentage of elderly adults at risk of malnutrition, as found in this study.

A food education program was incorporated into the MIHC, which focuses on caring for the aged, and was designed to address the issues of nutrition among elderly adults. Within the program, elderly participants learned how to choose healthy foods by being given an understanding what constitutes a balanced diet and the nutrients included in each food category. They also learned to buy ingredients within the same categories at a lower cost, which was particularly useful because they discovered that they could choose cheaper options among groups containing similar nutrients compared with other food items in the same category. This knowledge of nutrition allowed them to enrich their diets with choices available in food markets, using fresh food items rather than preserved products. This potentially broadened their options in the food databank, and varied the balance of nutrients to improve their health. In addition, the demonstrations of cooking methods facilitated their recall of cooking skills. The elderly commonly preferred ready-made and preserved foods because they were easier to prepare than home-cooked meals. With demonstrations of how to cook, the program demonstrated that cooking could be easy and that the participants were able to do this for themselves. Accompanied by free food samples, the food education program aimed to motivate the elderly to cook again.

The analysis of evaluation survey reflected good feedback, and demonstrated the successful implementation of the food education program. The compliance rate of Group B was better than that of Group A, implying that the increased number of free food samples offered encouraged the elderly to cook using the ingredients provided. Another reason for greater compliance could be that the free food samples motivated them to cook because the free food relieved the financial burden. No significant difference in the evaluation scores was observed between Group A and Group B, showing that the frequency with which free food samples were offered did not affect the satisfaction with the food education program. However, the greater number of free food samples significantly reinforced the amount of cooking undertaken. The success of the food education program was also indicated by the intention of the majority of the participants to cook continually and the improved nutritional status assessed by the MNA after 6 months.

The findings of this evaluative study emphasized the importance of a food education program for elderly adults living at home that simply refreshes cooking skills and provides community-based support through the supply of free food ingredients to improve nutritional status among the elderly population, which may further improve their health status and thus reduce their risk of developing diseases that result from poor nutrition.

Limitations of the study

The full MNA assessment required a considerable amount of time to complete. This discouraged the participants from undergoing the MNA 6 months after the end of the program. The lack of consent to the follow-up MNA assessment meant that only half of the participants were included in the post-intervention comparison of nutritional status. Although the results indicated an improvement in nutritional status, the small sample size could be a weakness in the evidence of the effectiveness of the food education program. It would be advisable to use a simpler assessment tool in future studies. Moreover, the participants claimed that the provision of a single recipe to be used throughout the week was too monotonous when they did not know how to select other ingredients in the same food group as substitutes. This implied that the food education program should increase the number of examples of recipes for the elderly participants to follow. Suggestions also included the publication of booklets with photographs of step-by-step instructions for cooking, which may be a convenient educational medium for older participants.

Implication for research and practice

The implementation and evaluation of a new food education program in this study provided an alternative health approach to tackle the problem of nutritional status in elderly people. The food education program emphasized the transfer of knowledge on food choices, and the maintenance of cooking skills to improve the appetite and stimulate the cooking practices of the elderly as a means to encourage them to eat more healthily.

AUTHOR DISCLOSURES

No conflict of interest involved in the manuscript.

REFERENCES

1. Thomas DR, Verdery RB, Gardner L, Kant A, Lindsay J. A prospective study of outcome from protein-energy malnutrition in nursing home residents. J Parenter Enteral Nutr. 1991; 15:400-4. doi: 10.1177/0148607191015004400.
2. Morley JE. Anorexia and weight loss in older persons. J Gerontol A Biol Sci Med Sci. 2003;58:131-7. doi: 10.1093/gerona/58.2.M131.
3. Chumlea WC, Roche AF, Mukherjee D. Nutritional assessment of the elderly through anthropometry. Columbus, Ohio: Ross Laboratories, Division of Abbott Laboratories; 1987.
4. Nutrition Screening Initiative. Nutrition screening manual for professionals caring for older Americans. Washington DC: Nutrition Screening Initiative; 1991.
5. Van Asselt DZB, van Der Schueren MAEB, Cammen TJM, Disselhorst LG, Janse A. Assessment and treatment of malnutrition in Dutch geriatric practice: consensus through a modified Delphi study. Age Ageing. 2012;41:399-404. doi: 10.1093/ageing/afs005.
6. Venzin RM, Kamber N, Keller WCF, Suter PM, Reinhart WH. How important is malnutrition? A prospective study in internal medicine. Eur J Clin Nutr. 2009;63:430-6. doi: 10.1038/sj.ejcn.1602948.
7. Saletti A, Johansson L, Cederholm T. Mini Nutritional Assessment in elderly subjects receiving home nursing care. J Hum Nutr Diet.1999;12:381-7. doi: 10.1046/j.1365-277x.1999.00178.x.
8. Persson MD, Brismar KE, Katzarski KS, Nordenstrom J, Cederholm TE. Nutritional status using mini nutritional assessment and subjective global assessment predicts mortality in geriatric patients. J Am Geriatr Soc. 2002;50:1996-2002. doi: 10.1046/j.1532-5415.2002.50611.x.
9. Cederholm T, Hellstrom K. Nutritional status in recently hospitalized and free-living elderly subjects. Gerontology. 1992;38:105-10. doi: 10.1159/000213314.
10. Saletti A, Lindgren EY, Johansson L, Cederholm T. Nutrtional status according to mini nutritional assessment in an institutionalized elderly population in Sweden. Gerontology. 2000;46:139-45. doi: 10.1159/000022149.
11. Kabir ZN, Ferdous T, Cederholm T, Khanam MA, Streatfied K, Wahlin A. Mini Nutritional Assessment of rural elderly people in Bangladesh: the impact of demographic, socioeconomic and health factors. Public Health Nutr. 2006;9:968-74. doi: 10.1017/PHN2006990.
12. Omran ML, Morley JE. Assessment of protein energy malnutrition in older persons. Part I. History, examination, body composition, and screening tools. Nutrition. 2000;16:50-63. doi: 10.1016/S0899-9007(99)00224-5.
13. Wellman NS, Weddle FDO, Kranz FS, Brain CT. Elder insecurities: poverty, hunger, and malnutrition. J Am Diet Assoc. 1997;97:S120-2. doi: 10.1016/S0002-8223(97)00744-X.
14. Chen RCY, Lee MS, Chang YH, Wahlqvist ML. Cooking frequency may enhance survival in Taiwanese elderly. Public Health Nutr. 2012;15:1142-9. doi: 10. 1017/S136898001200136X.
15. Edfors E, Westergren A. Home-living elderly people's views on food and meals. J Aging Res. 2012;2012:761291. doi: 10.1155/2012/761291.
16. Guigoz Y, Vellas B, Garry PJ. Assessing the nutritional status of the elderly: the Mini Nutritional Assessment as part of the geriatric evaluation. Nutr Rev. 1996;54:S59-65. doi: 10.1111/j.1753-4887.1996.tb03793.x.
17. Bauer JM, Vogl T, Wicklein S, Trogner J, Muhlberg W,

Sieber CC. Comparison of the Mini Nutritional Assessment, Subjective Global Assessment, and Nutritional Risk Screening (NRS 2002) for nutritional screening and assessment in geriatric hospital patients. J Gerontol Geriatr. 2005; 38:322-7. doi: 10.1007/s00391-005-0331-9.
18. Guigoz Y. The Mini Nutritional Assessment (MNA) review of the literature--what does it tell us? J Nutr Health Aging, 2006;10:466-85.
19. Vellas B, Villars H, Abellan G, Soto ME, Rolland Y, Guigoz Y et al. Overview of the MNA--its history and challenges. J Nutr Health Aging. 2006;10:456-63.
20. Vellas B, Lauque S, Andrieu S, Nourhashemi F, Rolland Y, Baumgartner R, Garry P. Nutrition assessment in the elderly. Curr Opin Clin Nutr Metab Care. 2001;4:5-8. doi: 10.1097/00075197-200101000-00002.
21. Hui WH, Law CB, So KY, Wong SL, Chan V, Kan I, Lo YM, Li E. Validating a modified version of the mini nutritional assessment in institutionalized elderly Chinese People. HK J Gerontol. 2001;11:35-43.
22. World Health Organization. The Asia-Pacific perspective: redefining obesity and its treatment. Health Communications Australia: Melbourne; 2000.

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一项食物教育计划提高居家老年人的食欲和健康状况的有效性

目的：评价一个 3 周的计划，该计划包括给老年人提供免费食物样品和烹饪示范来激励他们自己做饭和改善他们的营养状况。设计：一项实验前后比较研究。地点：香港的 3 个区。参与者：60 位年龄在 59-95 岁的居家生活的成年人。干预：A 组(每周提供一天 1 份的免费食物样品)和 B 组(每周提供 3 天每天 1 份的免费食物样品)。主要观察指标：每周进行满意度问卷调查。在基线和项目完成 6 个月后评估迷你营养评估(MNA)得分。分析：干预前后分别评估营养状况。重复性方差分析估量 3 周时的依从性，食欲和计划的容易性，目的在于区分为增强他们的烹饪技术到一个更高的水平而提供食物样本更频繁组(B 组)和不频繁组(A 组)。结果：B 组的依从率高于 A 组。60% 以上的参与者打算继续烹饪，1/3 的参与者表示对计划满意。6 个月后 MNA 得分比基线有所提高(两组数据合并)。结论：通过烹饪示范和以社区为基础分配食物原料的营养教育可以提高老年人的营养状况。

关键词：食欲、评价研究、满意度调查、食物教育计划、迷你营养评估