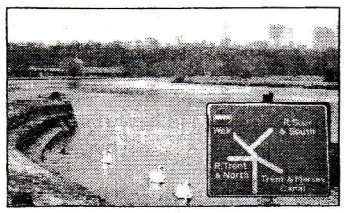
Using finger foods to promote independence, well-being and good nutrition in people with dementia



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Introduction

DEMENTIA IS A syndrome characterised by the development of multiple cognitive deficits that include memory impairment and either aphasia, apraxia, agnosia or a disturbance in executive functioning. The cognitive deficits cause impairment in social or occupational functioning and represent a decline from a previously higher level of functioning (DSM IV, 1994). Around 670,000 people in the UK have dementia, and numbers are increasing (Alzheimer's Disease Society, 1996).

Dementing illnesses affect all aspects of daily life and the ability to care for oneself, including eating and drinking. People with dementia and their carers are concerned about problems with eating and drinking (Alzheimer's Society, 2000). Such problems mean that individuals eat poorly and are thin (Singh *et al.*, 1988; Berlinger & Potter, 1991; Du *et al.*, 1993; Carver & Dobson, 1995). This puts the individual at greater risk of hypothermia, osteoporosis, fracture, depression, impaired immunity, delayed healing, pressure sores and micronutrient deficiencies (Department of Health, 1992). Older people with dementia are especially at risk of excess disability, that is more disabled than is warranted by their physical or neurological impairment (Kahn, 1965). Carers may intervene unnecessarily and increase difficulties with eating and drinking (Watson & Deary, 1996). People with extreme disability need help with eating and drinking, but unnecessary help can lead to a loss of self esteem and independence (Ford, 1996). People with dementia need to be encouraged to be independent with eating and drinking or there may be a rapid decline into general dependence (Archibald *et al.*, 1994). Those able to eat independently could be encouraged to do so, even if this means using the hands only. Foods suitable to this way of eating are commonly called finger foods (see Box 1).

Finger foods have been suggested as a way of preserving eating skills for those who have difficulty recognising or using utensils (VOICES, 1998). Such foods are presented in a form that can easily be eaten by hand and are more likely to be recognised. They are usually served at room temperature so that people eat at their own pace. Spills are minimised, preserving the dignity of the individual. It has also been suggested that the greater interaction with food encourages greater food consumption (Soltesz & Dayton, 1993).

Over Christmas and New Year 1998/99, staff on continuing care wards at Kingsway Hospital, part of the Southern Derbyshire Mental Health Trust, noted that many patients who usually had difficulty with eating and drinking were managing the buffet-style meals very well, and apparently enjoying them. These observations, together with an increasing emphasis on Person Centred Care for people with dementia in the Trust, prompted this project. There seemed to be a need to have a menu of finger foods but we needed to demonstrate the relevance and value of such a menu.

Box 1. Examples of finger foods

toast fingers	chicken nuggets	carrot sticks	teacakes
buttered rolls	fish fingers	celery sticks	banana pieces
sandwiches	fish cakes	chips	roast potatoes
sausages	samosas	potato cakes	crumpets
meatballs	orange segments	apple slices	chocolate
cherry tomatoes	grapes	ice cream in cones	crisps
biscuits	pieces of cake	jam tarts	hard boiled eggs

In this project we aimed to evaluate the influence of the finger foods on independence, well being, and nutrition of people with dementia who have difficulty using cutlery, but who have no dysphagia, and are physically well.

Methodology

We used Single Case Methodology (Hersen & Barlow, 1976) for this project. This has been advocated as a way forward in research in dementia care generally (Turpin, 1999), and specifically for examining feeding difficulties in people with dementia (Watson, 1993). The results of single cases are absolutely valid for the individuals studied, and meaningful generalisations may be made through replication of studies on groups of similar individuals. Furthermore, any adverse effects on, or lack of response from the individual, are identified during the course of research. This contrasts markedly with group comparison methodologies, in which it is sometimes necessary to wait until the end of the research period and the analysis of results, to see detrimental effects or non response. In addition, the selection of truly random samples, a fundamental part of group methodologies, is always problematic and would be particularly so with people with dementia. Furthermore, group comparisons are sometimes not acceptable to carers, who may consider it unethical to withhold a potentially beneficial intervention. There are examples of 'sabotage' of research, with those in the control group also receiving the intervention (le Roux, 1988). Finally, analysis of group work usually demonstrates the statistical significance of the difference between the groups, but does not offer insight into its clinical significance.

We devised a menu of finger foods, based on the standard 21-day hospital menu cycle. The Catering Service in the Trust recorded the purchase of additional items for use on this special menu. Individuals were selected to receive the finger foods if ward staff assessed them as being physically well, having no evidence of dysphagia but having some difficulty in using cutlery.

The dependent variables chosen reflect those recognised as important for the maintenance of 'personhood' in people with dementia (Kitwood, 1997). We observed and rated independence with eating and drinking (Pinkston & Linsk, 1984), and our rating of well-being used a global six point rating derived from dementia care mapping (Bradford Dementia Group, 1997). Two observers took three measures at each stage: baseline, start of finger foods and then six weeks later. Mealtimes were divided into three minute observation periods. We continued to monitor weight change as it is recognised as an indicator of nutritional state in older people (BAPEN, 1996; Bond, 1997; Ward *et al.*, 1998).

We used Excel to analyse the results for the frequency of observations for individual subjects. If we noted a number of different scores in a single time period, the highest score was used in the analysis. We used SPSS to calculate Cohen's Kappa statistic to assess the inter rater reliability of our observations.

Results

Ward staff identified nine patients who met the criteria for inclusion in the study, representing 24 per cent of the patients on the two wards where the observations were made. We recorded 2376 observations for six female patients between January and April 2000. Three patients were not included: one patient had a shoulder injury, so was unable to pick up anything; another patient needed to be nursed in bed for a period so it was inappropriate and impractical to observe her eating in these circumstances; and the third patient was discharged before we carried out the follow-up observations.

We made all observations at midday meals. Inter rater reliability was good: Cohen's Kappa statistic was 0.64 for well-being, indicating substantial agreement between observers. For independence it was 0.92, indicating almost perfect agreement.

We made some changes to the menu as the observation period progressed. Foods that we considered appropriate when the menu was compiled were found to be unsatisfactory in practice (Box 2). Other foods which were not considered at first to be finger foods (e.g. jacket potatoes) proved to be convenient and popular.

Food costs in the Trust are £14.50 per patient per week. The additional cost of the finger foods menu was, on average, £1 per patient per week, or an extra 7 per cent. This may represent a significant increase in food costs if 24 per cent of patients could benefit from finger foods.

Observation data have been aggregated in order to save space in this report and are shown in Table 1. All six patients lost weight in the weeks before baseline observations were made, but only one continued to lose weight through the project and after the follow-up observations. Three patients maintained their weight and two had gained weight.

Box 2. Finger foods that proved unsatisfactory

muffins (particularly chocolate ones)	– too crumbly
roast potatoes	– too hard
shortbread finger biscuits	– too hard and thick
malt loaf	– too sticky around teeth and dentures

Table 1. Aggregated data: mean (range) scores for observed variables at the three stages of the project

	Baseline	Finger foods	Follow-up
Weight(kg)	51.7 (43.1 – 56.5)	52.1 (41 – 60.5)	52 (40.8 – 61.9)
Independence (% observations of independent eating)	43.8 (0 – 79)	77 (37 – 96)	73 (33 – 96)
Well-being (% observed positive scores)	74.5 (46 – 92)	94.2 (84 – 100)	91 (68 – 100)

Finger foods increased independent feeding for all six participants, and this increased independence was maintained at follow-up.

Similarly, all six patients had increased well being scores after the introduction of finger foods, and these increased scores were maintained at follow-up.

For brevity, detailed findings and case vignettes are given for two cases only. These are illustrative rather than representative. Findings and vignettes for all the cases are available from the first author.

Patient D

Born in 1919, this patient had diabetes mellitus and a 'four to five year history of signs and symptoms compatible with a diagnosis of senile dementia of the Alzheimer's type'. She scored 0/30 on a Mini Mental State Examination in the period of the study.

Weight

This patient's weight had fluctuated over the six months before the project. At that time she was unable to feed herself but resisted help from the staff. Her weight became more stable after finger foods were introduced.

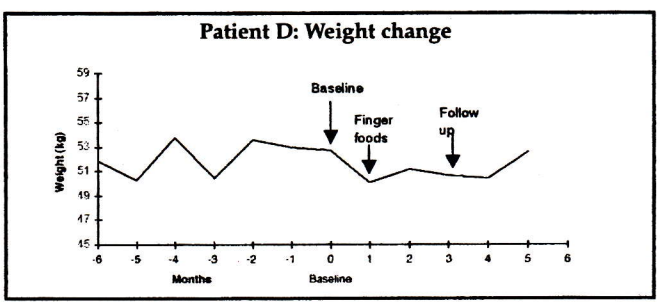
Independence

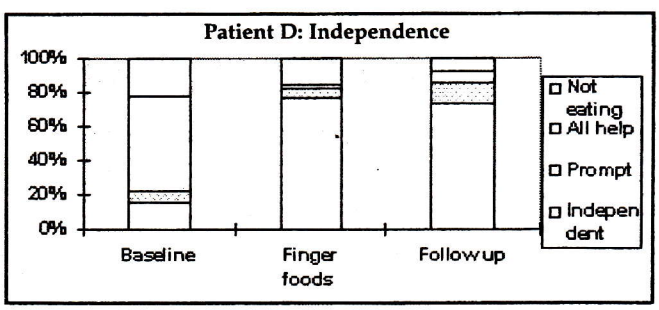
There was a great increase in the patient's independence with finger foods and this level of independence was largely maintained at follow up. This patient routinely waited 2 mins 45 secs between mouthfuls of finger foods. She would spontaneously pick up food and eat it after this time, if not prompted. It is questionable, therefore, whether some of the prompts observed were necessary.

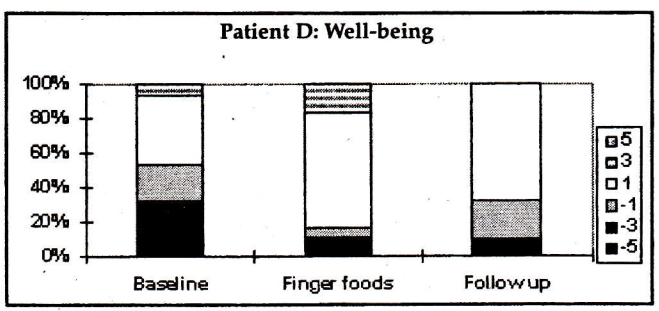
Well-being

Well-being improved after the introduction of finger foods, with the lowest negative scores (-5) eliminated, and higher positive scores (3) increased. At follow up, the negative (-1) scores had increased again and higher positive scores (3) eliminated. However, the positive scores were still greater at follow up than at baseline.

This patient was discharged from hospital some weeks after the project was completed.







Patient J

Born in 1910, this patient had multi infarct dementia. She was unable to co operate with any assessment of her cognitive functioning, such as the Mini Mental State Examination. This patient made spontaneous, loud and prolonged vocalisations for most of the day.

Weight

This patient's weight was decreasing for several months before the project. She had become increasingly difficult to feed because her vocalisations made it almost impossible for staff to put food into her mouth. The introduction of finger foods resulted in a reversing of the weight loss.

Independence

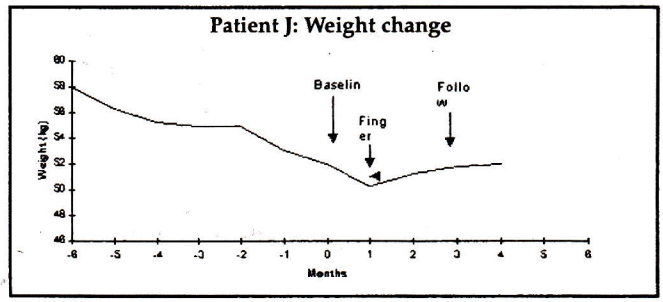
During the baseline observations it was noted that staff tried to prompt the patient to eat by interrupting her vocalisations. This often resulted in the patient increasing the volume of her speech. On several occasions, the member of staff tried to secure the patient's attention by repeating her name. This seemed to create a 'mirror image' of sound: the patient and carer each repeating their own sound, at increasing volume, neither listening to the other.

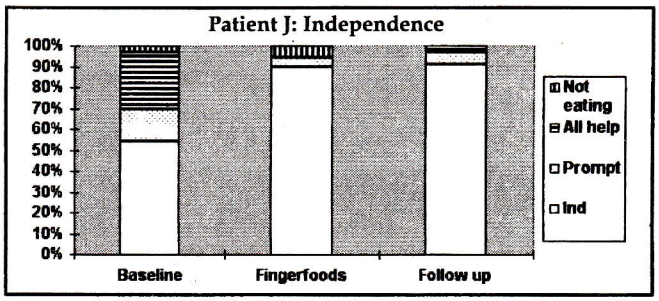
This patient became almost completely independent with eating and drinking with finger foods. The increased independence was maintained through to the end of the follow up observations. Her vocalisations were noticeably reduced in volume and length when she fed herself, though the precise changes were not formally assessed.

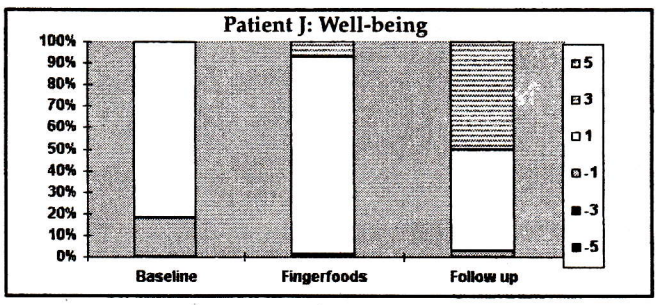
Well-being

Finger food improved the well-being of this patient, with negative (-1) scores reduced and higher positive scores (3) greatly increased.

She died suddenly just a few days after the study was completed.







Discussion

We were prompted to carry out this service evaluation project when staff noted how much patients enjoyed finger buffets provided for them over a Christmas and New Year holiday. We recognise that mealtimes are complex, and that many factors can influence the experience of eating and drinking. These include the time available for meals (Durnbaugh *et al.*, 1996); the number and skills of staff (Norberg & Athlin, 1989) and the level of noise, interruptions and distractions (Van Ort & Phillips, 1995). Our project made no attempt to alter any of these other mealtime features. However, the introduction of finger foods represented a major change for those patients who received them so we feel justified in drawing some conclusions from our results.

The patients we observed all had increased independence and improved well being after the introduction of finger foods, which also had generally positive effect on nutritional status, as indicated by weight change. These were sustained through the follow-up stage, and, in our judgement, represent valuable, positive changes for the patients concerned.

This project could not have been carried out without the interest and commitment of the catering staff at Kingsway Hospital. Catering is designated a non clinical service, but we have demonstrated that it has positively affected the quality of life of our patients, by promoting their independence, well being and nutritional care. In recent times, non clinical services have not had investment and, indeed, have been the target for savings and cost cutting. The importance of hospital catering to inpatient care, and the need for investment in it, was recognised recently (Department of Health, 2000) The cost of the improvements we have described is a modest £1 per patient

per week, although if, as we found, about a quarter of patients in hospital settings may benefit the total cost may be substantial. Any additional cost would need to be considered by Trust managers and commissioners of services, as it is unlikely to be affordable from current, tight budgets.

The majority of older people with dementia in long term care are now looked after in non specialist residential and nursing homes (VOICES, 1998). In contrast, this project was carried out in a specialist Mental Health Trust with qualified and experienced clinical and support staff. Further research would be needed to demonstrate that the benefits we have observed can be reproduced in non specialist settings. If a substantial proportion of people with dementia can preserve their independence and improve their well being while maintaining their nutritional status, as our patients did, then a finger food menu will need to be a routine alternative in all care settings.

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