

Organic hospital food is desired by patients and engages the kitchen

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Abstract

In December 2005 a questionnaire survey was conducted at the University Hospital in Trondheim, Norway. Patients and personnel expressed that food is important for their health and well-being. Good taste, appearance and right nutrition were mentioned as being important factors for food quality. About 80 % of the respondents were positive to the use of organic food at the hospital, even though only about half of them agreed that it is worth the price. The absence of pesticides, artificial fertilizers and preservatives in food was ranked to be more important than organic production of food. All respondents seemed to be critical to the use of pesticides and preservatives in food production and processing.

Introduction

In 2003 a project focusing on the introduction of organic and local food was initiated at the University Hospital in Trondheim. The work was coordinated by the Norwegian Institute for Organic Farming (now Bioforsk Organic Food and Farming Division). The aim of serving 30 % organic food by the end of 2006 has been reached on average for the kitchen. The kitchen produces about 1200 meals every day for 60 divisions at the hospital. The objective of this study is to gain empirical insight into the patients', nurses' and kitchen staff's perception of the food served at the hospital, their views concerning food production methods, as well as differences between the three groups regarding the two aforementioned issues. The results are based on a survey, conducted in 2005, which was part of the organic hospital food project.

Materials and methods

The data were collected in a questionnaire survey on quality, processing and attitudes about food served at the university hospital of Trondheim in Norway. In December 2005 the questionnaire was handed out to 200 patients, 370 staff members and all 60 kitchen employees. After several reminders 355 persons (56.3 %) answered. We asked about hospital food, particularly requesting statements on organic and conventional food and on food in general. Most of the questions were closed questions, where statements had to be rated on a Lickert type scale. The results from the three groups were examined by descriptive analyses. Mean values obtained in the groups were compared by *t*-tests for independent samples.

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Results

Nearly half of the questionnaires handed out to patients were returned. Nearly 60 % of the nurses and kitchen staff replied, as Table 1 shows. More than four-fifths of the respondents working at the hospital were women, but the male-female ratio among patients was more balanced. The group of patients was older than the respondents working at the hospital. More than 40 % of patients had eaten less than seven days at the hospital in 2005, another 45 % less than a month. Seventy-five percent of the nurses had hospital meals on more than 30 days a year.

Tab. 1: Characteristics of the respondents

	Patients	Nurses	Kitchen staff
Number of respondents	98	222	35
Response rate in group	49 %	60 %	58 %
Women / men (% in group)	57 / 43	84 / 16	80 / 20

On a Lickert scale, patients and nurses were to rate their satisfaction with the food served at the hospital on a scale from "really satisfied" (1) to "really dissatisfied" (5). On average about half of both groups were "satisfied" with the menu in general, lunch and different ingredients as vegetables and potatoes. The two groups differed significantly (P -value < 0.05), in that more patients (about 30 %) were "really satisfied" with the menu in general, lunch and different ingredients than nurses (about 10 %). About 15 to 30 % of both groups were neither satisfied nor dissatisfied (3) regarding these issues.

All three groups were asked to rate statements on Norwegian agriculture on a Lickert scale from "totally agree" (1) to "totally disagree" (5). About 90 % of the patients and nurses agreed somehow or were not sure if the branding of "Norwegian farmed food" (Godt Norsk) indicates pure products, which it actually doesn't. 24 % of the kitchen staff "disagreed" or "totally disagreed" on the same statement, about three times more (P -value = 0.043, based on a chi-square test) than the two other groups. More than 70 % in each group stated that organic farming does not use artificial pesticides. 20 % or less in each group agreed that Norwegian agriculture does not pollute the environment. 56 % of the patients and kitchen staff agreed that organic food is worth the price, compared to 33 % of the nurses. On the other hand, 16 % or less in each group did not agree that organic food is worth the price. The rest was not sure.

Asked about food routines at home, about 75 % of patients and kitchen staff and 27 % of nurses (P -value < 0.000) answered that they prefer cooking meals based on raw materials rather than using convenience food. There were no significant differences between the groups regarding the use of organic ingredients and seasonal food. More than 60 % in each group used organic products "often" or "sometimes" at home, while less than 10 % used freshly harvested seasonal products "seldom" or "never".

For most of the questions about hospital food and the methods of food production, there were no significant differences between patients and nurses. The expectation that meals should taste and look good was ranked highest. For the respondents it is important that (in decreasing order of importance) food contains the right nutrients, is mostly without preservatives, is produced without pesticides, and finally avoids the use of artificial fertilisers. It was more important for patients than for nurses to get traditional meals and have local food production. All respondents rated the use of organic products as less important compared to traditional meals and local food.

More than 90 % of patients and nurses answered that meals are important for both their health and well being. Asked to rate their opinion about using organic food at the hospital, 37.9 % were "really positive", 44.6 % "positive", 16.9 % "neutral", only 0.6 % were "negative" and none "really negative".

The kitchen staff was asked to rate reasons for introducing organic food at the hospital. The most important reason out of a list of 10 was to have "less chemical preservatives", followed by "increased awareness on food, health and the environment", a "more healthy diet" and better "animal welfare". As barriers to the introduction of organic hospital food they mentioned a "higher price for organic products" and "less supply" as most important. On the other hand, they disagreed that organic food has a purer taste.

Discussion

On average, all respondents were satisfied with the food served at the hospital. However, it was striking that nurses, eating the same meals, were less satisfied with the food than the patients. There may be several reasons for this difference. Most of the nurses often eat at the hospital. A repetition of the menu every fourth week can be perceived as being monotonous. Furthermore, they may be more critical because they have to pay for the meals, and stress at work may also result in the expression of more critical views in their replies.

While most of the respondents were convinced that branding for "Norwegian farmed food" indicates pure products, a larger share of the kitchen staff was critical to this implication. As long as conventional agriculture in Norway is strongly associated with "pure" production it seems to be difficult to convince consumers to pay an extra price for organic products.

Without the positive reputation of conventional farming in Norway, the ideal image of food production and processing without pesticides, artificial fertilisers and preservatives would probably have resulted in more respondents preferring organic products. On the other hand, considering how strongly people like to avoid pesticides, artificial fertilisers and preservatives, it is not surprising that more than 80 % of the patients were positive to the use of organic hospital food. Patients possibly reconsider their outlook on life when facing health problems, especially when these are a result of, or favoured by, food consumption and pollutants (Schuster A et al 2006). The results from personnel may indicate that not just one's own disease, but also working with diseases can lead to a more critical attitude towards the use of pesticides and preservatives.

A study by the Norwegian organic inspection body (Debio 2003) pointed out that less than 30 % of Norwegian consumers mentioned to be very or fairly interested in buying organic products. One reason for the different interest in organic products between patients and Norwegian consumers may be an increased interest for organic products over time; another could be the place the questionnaires were conducted: The wish to get more organic hospital food is free of charge. However, if you are interested in buying more organic food yourself you have to pay for it. While more than 80 % of the respondents in this study were positive to the use of organic food, only 56 % of all patients and kitchen employees and 33 % of all nurses agreed that organic food is worth the extra price. This demonstrates the discrepancy between the wish for organic food and the willingness to pay for it. The statement that organic food is more

expensive was ranked as the most important barrier for buying more organic food in another Norwegian study about organic food consumption (Askew 2005).

While kitchen staff ranked arguments related to health and animal welfare to be important for introducing organic food at the hospital, they pointed out the higher price for organic products and insufficient supply as important barriers. Indeed, the price premium is important as long as the hospital kitchen has a fixed budget for each meal served. This makes it difficult to use a large share of organic products. However, a growth in organic sales will probably lead to a better supply of organic products and reduced prices. In addition, it is still difficult to obtain certain organic ingredients in Norway. Some products are still not available on the market at all. Other problems are related to quality, time of delivery, quantity and sometimes high price differences.

Conclusions

Organic food is highly welcomed by patients and personnel at the hospital. The kitchen workers are also positive to using organic ingredients. Using organic food and informing about it may lead to a higher contentment among patients and personnel and a higher reputation of the hospital.

All respondents at the hospital seemed to be more interested in getting organic food than the population in Norway as a whole. Important reasons are probably a critical view on the use of chemical pesticides and preservatives and the expected effect of meals on health and well being. Research is needed to find out if the differences between respondents at the hospital and the Norwegian population are significant, and to determine their causes.

The combination of quality and price is highly relevant to the consumers. If consumers shall buy more organic products, consumers need more information about organic production, they need to learn arguments for buying organic food and why the price for such products usually is higher. The kitchen staff, having been provided a course on organic food, was more positive to using organic products than the other groups. This shows that communication and information can be a key to success.

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