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**"Less Tobacco and**

**Healthi­er Food at Work"**

**The Case of Den­m­ark**

Report to the EC commis­sion

Division V - 01/20

Europe Against Cancer

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November 1992

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This report is the Danish contribution to a larger feasibility

study for the EC Commission on "Less Tobacco and Healthier Food at Work" conduc­ted in Denmark, Greece, the UK, and Germany. This paper intends to present Danish data on the smoking and nutri­tion situation at work based upon statistics and expert inter­views. However, we have to admit the lack of data. So even if we have much information on smoking and cancer risk for the entire Danish population, these data are not related to the work place, and the nutrition statistics are even more scarce. Therefore, the Danish picture of tobacco and food at work has to be drawn tentative­ly.

Nevertheless, it is possible to get some impression of the Danish situation and at the same time more easily identify what data are needed in order to proceed.

And this is exactly the aim of this study: to create a basis for further exploring of the poten­ti­als of the work place for the improve­ment of the health of the employ­ees.

1. INTRODUCTION

1.1 Health as a National Topic

The Danish welfare state faces a paradox. We canalise a lot of the taxpayers' money to the Health and Hospital sector and improve the working conditions in several ways and still the expec­tation of life at selected ages has remai­ned unchanged over the last two decades.

We know that smoking and food play a vital role in this connec­tion. It is estimated that "5000 Danes die of cancer and that approximately 6000 Danes die of heart diseases as a result of smoking. It is between 1/3 and 1/4 of all deaths in Denmark" [[1]](#endnote-2). And "every year 25.000 Danes get some kind of cancer of whom 15.000 sooner or later will die from this disease. Every third Dane gets cancer before the age of 75" [[2]](#endnote-3). "The number of cancer incidents has raised from well over 9.000 a year in the 1940s to around 25.000 in the 1980s" [[3]](#endnote-4). From the perspec­tive of the work place, we know that especially elderly people get cancer. "More than 50 % of all new cancer diseases are regi­stered for persons over the age of 65 years" [[4]](#endnote-5). Therefore,

the labor market is less con­fron­ted with cancer than the actual size and character of these di­seases should justify.

But the importance of the workplace for our health is evident, cfr. the fact that "Danish work places every year use 250.000 tons of cancer inducing products...and that specialist estimate that at least 1000 people every year get cancer because of their work with cancer dangerous material" [[5]](#endnote-6).

For these reasons, a number of governmental institu­tions have been established to improve the health conditions at work in Denmark.

So from whatever perspective, economy, medicine, and politics, health is a national topic and has been so for more than the last half century [[6]](#endnote-7).

1.2 Explorations

The Danish experts interviewed on cancer are broadly drawn. Peter Madsen represents the Tobacco Industry, whereas Merete Strand and E. B. Thorling work for the private Danish Cancer Society. Tage Egsmose is a newly retired ass. professor in medicine, University of Copenhagen. All four are politi­cally independent. Compared to the above four experts no politically based expert has been found, neither from trade unions, employ­ers'as­sociation, civil ser­vice, or political live.

The expert representation on the nutrition side is different. Three out of the four experts are employed by Governmental/

munici­pal authoriti­es: Margit Groth, National Food Agency, Johanne Haralsdottir, the Veterinary and Agricultural Universi­ty and Jørgen Højmark Jensen, Municipal Food Control Unit of

Copenhagen.

The fourth expert, Orla Zinck, has been a civil servant as well, but together with three former colleagues from the Natio­nal Food Agency, he has established a private company advicing hospitals, companies, etc. on how to operate canteens. More­over, his firm is now serving as a "WHO collabora­ting centre for Nutri­tion in Mass Catering".

The three canteen managers are employed in the private sector. Svend Aage Lassen, Scandinavian Tobacco Co., represents the Industry, whereas Lars Sonne Hansen and Mogens Sørensen are working in interest organisations. All three of them work, without any doubt, in the more progressive part of Danish canteens.

2. INDUSTRIAL ENVIRONMENT

2.1 Basic Structure

The distribution of the Danish work force by Industry is shown in table 1.

Table 1. Danish Employed Population by Industry and by Sex. \*)

%. 1­990.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Economic Active Population | Total | Sex | | Sex Distribution by  Industry | | Total |
|  |  | Men | Women | Men | Women |  |
| Agriculture | 5 | 8 | 3 | 73 | 27 | 850.000 |
| Industry | 20 | 35 | 16 |  |  |  |
| Building | 6 |  |  |  |  |  |
| Private Service | 38 | 40 | 36 | 57 | 43 | 1.010.000 |
| Public Service | 30 | 17 | 45 | 31 | 69 | 790.000 |
| % | 100 | 100 | 100 | - | - |  |
| N (thousands) | 2.650 | 1.455 | 1.219 | 1.455 | 1.219 | 2.650.000 |

Source: Samfundsstatistik 1991, p 40, table 12.1

\*) Calculated as full time employement

The first column shows the total Danish employed population. The single greatest sector is Private Service. Almost 4 out of 10 occupied people earn their living here. The second greatest sector is Public service. In Denmark, almost every third Dane works in this sector. In Japan, only one out of twenty do so. The third most important sector is Indu­stry/pro­duction. Two out of ten are occupied here. In Germany, the same figure is four out of ten.

The second column shows the gender composition by Industry and that 1.2 mio women and 1.4 mio men are occupied, in total.

The third column reflects the relati­ve proportion of men and women within each sector in order to illustrate the typical male and female sector. In In­dustry etc., 73 % of all jobs are occupi­ed by men and only 27 % by women. The op­posite is the case in the Public sector where only 31 % are men and 69 % are women. The Private Service sector is the most gender equal sector with 57 % are men and 43 % women.

2.2 Composition of Work force

Most of the Danish firms are rather small. Almost three out of four companies sell for less than 1 mio DKK a year, whereas only 4 % of all firms provide 78 % of the total sale, cfr. table 2.

Table 2. VAT-Registered Privat and Public Firms by Size and Sales

%. 1989.

|  |  |  |
| --- | --- | --- |
| Mio DKK | Firms | Sales |
| 0 -> 0.9 | 72 | 4 |
| 1 - 9­.9 | 24 | 18 |
| 10 -> | 4 | 78 |
| % | 100 | 100 |
| N | 366­.000 | 1.451 mia |

Source: Samfundsstatistik 1991, p 50, table 13.6

Accordingly, most Danes earn their living in minor firms. Even in Industry defined as a work place with 6 or more jobs, 79 % are occupied in companies with less than 500 employees. Howe­ver, 21 % of all jobs are found in less than 1 % of all In­dustrial firm­s, cfr. table 3.

Table 3. Danish Private Firms in Industry by Size and Employe­es.

%. 1990.

|  |  |  |
| --- | --- | --- |
| Employees | Firms | Empl­oyees |
| 6 - 49 | 78 | 27 |
| 50 - 500 | 22 | 52 |
| 500 --> | 1 | 21 |
| % | 101 | 100 |
| N | 7.100 | 384­.000 |

Source: Samfundsstatistik 1991, p 56, table 16.2

The most essential change in the composition of the Danish work force is the increase of female employement. So, the rate of occupa­tional activity for men and women has narrowed over the years. On the average, 75 % of all Danes between the ages of 15 to 74 years have a job, cfr. table 4.

Table 4. Danish Economic Active Population, Workforce and Employement

by Occupational Activity and by Working Hours. %. Spring 1990

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Popu­la­tion  15-74  ye­ars | | Wor­k­for­ce  N % | | In Work  + - | | Occupational  Activity  Full Part time time | | Working hours  Ordinary Evening Shift  Night work | | |
| T­otal  (1­000) | 3.900 | 2.928 | 75 | 2.670 | 258 | 78 | 22 | 81 | 4 | 11 |
| Men | 1.950 | 1.576 | 81 | 1.449 | 127 | 90 | 10 | 81 | - | - |
| Women | 1.948 | 1.362 | 69 | 1.222 | 130 | 65 | 35 | 82 | - | - |

Source: Levevilkår i Danmark 1992, (Living Conditions in Denmark, 1992),

p 154 - 155, tables 7.1 -7.4

This overall occupatio­nal activity covers the fact that 81 % men and 69 % women have a job. Table 4 also shows that more women than men are unemplo­yed and that nine out of ten men work full time or more, whereas only two out of three women do so. The same pro­portion of men and women, respectively 81 % and 82 %, work at ordinary hours in the day time, while 4 % of the Danes permanently have evening or night work and 11 % work shift hours, and finally 4 % are to be placed in two or more categories.

3. SMOKING

3.1 The Smoking Population

In Denmark, the smoke rate is 44 %. Around 2 mio out of 5.2 mio inhabi­tants smoke, of which 800.000 are heavy smokers [[7]](#endnote-8). It is the highest smo­ke rate in Europe, where the average smoking rate is about 30 %. The great con­sumption of particularly cigare­ttes is further underlined by the fact that in spite of the heavy taxation making Danish ci­garettes probably the most ex­pensive in the world, people seem not to be discouraged from smoking.

3.1.1 Supply

The total tobacco supply in Denmark has increased since 1920, particularly regarding cigarettes, cfr. table 5.

Table 5. Consumption of Tobacco in Denmark by Cigarettes, Cigars, and Smoking Tobacco.

%. 1920 - 1990.

|  |  |  |  |
| --- | --- | --- | --- |
| Consumption per Year | 1920 | 1960 | 1990 |
| Cigarettes mio per capita | 860  272 | 4.990 1.084 | 6.735 1.310 |
| Cigars mio per capita | 407 129 | 974 205 | 310 60 |
| Pibe Tobacco tons gram per  capita | 2.493 0,79 | 2.468  0.55 | 3.215  0.63 |

Source: Danskernes Rygevaner, (Danish Smoking Habits), 1992, p 54 - 55,

tables B.10 - B.11

In the same period, the relative supply of cigars/cigaril­los and smoking tobacco per capita decreased. In table 4, tobacco individually imported from abroad is not in­cluded.

3.1.2 Demand

The composition of the Danish smoking population as to sex, age, and profession is shown in table 6.

Table 6. The Smoking Population in Denmark by Sex, Age, Pro­fession, Intensity and Ex-Smokers.

%. 1970 - 1991.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | To­tal 1991 | Men | | Women | |
|  |  | 1970 | 1987 | 1970 | 1987 |
| Sex | 44 | 68 | 50 | 47 | 41 |
| Age  15 - 19 years | 27 | 51 | 22 | 38 | 25 |
| 20 - 24 - | 39 | 65 | 43 | 53 | 43 |
| 25 - 29 - | 48 | 69 | 52 | 54 | 49 |
| 30 - 39 - | 50 | 72 | 54 | 58 | 49 |
| 40 - 49 - | 44 | 77 | 58 | 55 | 44 |
| 50 - 64 - | 50 | 71 | 55 | 46 | 47 |
| 65 --> | 38 | 63 | 48 | 30 | 32 |
| Profession  Salaried employe­es  upper levels | - | 73 | 48 | 55 | 37 |
| - , lower - | - | 75 | 54 | 59 | 45 |
| Skilled Workers | - | 74 | 56 | 59 | 55 |
| Unskilled Workers | - | 75 | 63 | 61 | 57 |
| Pupils, Students | - | 49 | 22 | 34 | 26 |
| Heavy Smokers | - | 11 | 22 | 7 | 15 |
| Ex-Smokers, Selected Ages |  | 1987 | 1990 | 1987 | 1990 |
| 25 - 29 ye­ars | - | 12 | 8 | 11 | 11 |
| 50 - 59 - | - | 28 | 24 | 17 | 16 |
| 70 - 79 - | - | 44 | 41 | 28 | 25 |

Source: Danskernes Rygevaner, (Danish Smoking Habits), 1992, p 47 - 53,

tables B.3 - B.9 and Levevilkår i Danmark 1992, (Living Conditions

in Denmark, 1992), p 93, tables 5.31 - 5.32

The gender gap between men and women has narrowed over the last twenty years. In 1970, the proportion of smoking men was 68 %, in 1987 only 50 %. During the same periode, the pro­portion of smoking women dropped from 47 % to 41 %.

In 1987, half the Danish smoking population was recruited as teenagers, ie. before their 20th birth­day, more pre­cisely 25 % of the women and 22 % of the men. During the next five years, the smoking rate increased, so 43 % of both men and women are smokers before their 25th birthday. In the age interval from 25 to 64 years, the smoking rate for men and women is stable, ie. between 52 % to 58 % for men and from 43 % to 49 % for women. From the age of 65 years and more, the smoking rate has been reduced to 48 % for men and 32 % for women. So, more women than men stop smoking after having retired.

In all professional groups, the number of smokers have dropped from 1970 to 1987, especially for salaried employees in the upper levels and for pupils/students. This goes for both men and women. However, the reduction for skilled male workers (from 74 % to 56 %) is more signifi­cant than that for the same category of women (from 59 % to only 55 %). A modest reduc­tion is seen for unskilled male and female workers.

When table 5 (unchanged tobacco consumption) and table 6 (reduc­tion in the number of smokers) are combined, it is obvious that fewer smokers do smoke more. This tendency within the smoking popula­tion is found for all professions and for men and women alike, except for the salaried women in the upper levels whose con­sumption have remai­ned stable.

To day, around 20 % of the Danish population are ex-smokers. The proportion of ex-smokers corrolates with age. The older people grow, the greater is the number of ex-smokers [[8]](#endnote-9).

3.2 Cultural Aspects of Smoking

The interviewed experts expressed the opinion that Denmark has a relaxed attitude towards smoking restrictions compared with other countries. This liberal Danish attitude is found for alcohol, as well.

However, the tolerance towards smokers has decreased over the last ten years. More companies have issued restrictive smoking regula­tions and some have even forbidden their staff to smoke on the premises. In other firms it has been suffici­ent that the smokers them­selves have become more consi­dera­te towards no-smokers. But the new relation between smokers and non-smokers is that smokers now have to adjust to the demands imposed upon them by non-smokers.

The size and character of smoking regulation differs from one company to another, so no unambiguous picture can be drawn. For instance, in a survey among employees in a major bank, 2/3 of the no-smokers wanted to stay in their normal lunch group together with their smoking colleges even if a non-smoking area was establis­hed in the canteen. And many smokers prefer no-smoking railway compart­ments in order to avoid passive smo­king.

Some experts see a new trend where smoking is classified as "low level", cfr. table 6, with the highest reduc­tion in the number of smokers found particularly for the salari­ed employees in the upper levels.

No experts were able to explain why people start or continue to smoke, but they agreed upon smoking as related to life style [[9]](#endnote-10)

3.3 Institutional Factors, Agents, and Policies

3.3.1 Agents of Change

As already mentioned, the interviewed cancer experts came from three different groups: Research, industry, and non-profit organisa­tions. This gives a rather realistic picture of who are the trend-setters in the smoking debate in this country and confirms the fact that politicians and public servants are not. They play no significant role in the debate, except for Tobaks­skaderå­det, the Danish Council on Smoking and Health. This governmental agency works closely together with the two private associations, the Danish Cancer Society and the Danish Heart Foundation and neither of the three initiate any campaign without having consulted the other two in advance. Apart from this, there is neither cooperation nor communication between the Danish smoking agents. For instance, The Danish Cancer So­ciety and the group of consi­derate smokers, HENRY, have, of course, con­trasting points of views. But they never argue with one anot­her publicly. The politici­ans and civil ser­vants are per definition impor­tant actors, but they keep silent and so do the Danish tobacco industry, the unions, and the employ­ers' associa­tion. Even between resear­chers, the mutual contact is limi­ted.

It gives much room for the single most active group or actor in the smoking debate, the Danish Cancer Society. It is a very rich organisation [[10]](#endnote-11), which finances two thirds of all cancer rese­arch in this country. This is remarkable as Parlia­ment and

G­overn­ment normal­ly pay health research expenditures. So compared to other private and non-profit health organisations in Den­mark, the Danish Cancer Society has a unique position.

One group or actor plays no role at all, the cancer patients themselves whose needs are often neglected [[11]](#endnote-12), even if the other actors claim to work for them. With the lack of public dis­cussion and the lack of political will to improve the high smoking rate in Denmark, the battle field of the smoking debate is occupi­ed by engaged combattants who never meet and who claim to figh­t on behalf of an absent actor, whose interest has never been defined by Government.

3.3.2 Programmes

Accordingly, in Denmark no overall smoking policy plan has been launched by Government as it has been the case in other Western countri­es. Since 1970, four political parties have on five different occasions presented smoking bills in Parlia­ment, however unsuccesfully [[12]](#endnote-13). The proposals have concentra­ted on three subjects: restriction on tobacco advertising, risk labelling of cigarettes, and the establishing of anti-smoking areas in public buildings etc.

The government's policy can be summarized in this way: the Govern­ment has made a deal with the tobacco in­dustry to avoid young people below 35 years of age appear in tobacco commer­cials. More­over, the Govern­ment has decided to prohibit smoking in public buildings and it has established Tobaks­ska­derådet, Danish Council on Smoking and Health as an acting governmental agent. But neither of these initiatives are Acts of Parlia­ment and they are too insufficient with respect to money and compe­tance to play a significant role.

Due to both the lack of a compre­hensive smoking policy and the few and vague smoking regulations, Denmark has been described as a LDC (Less Develo­ped Country) nation by some experts, who at the same time refer to its high smoking rate of 44 %, cfr. table 6. So, where the political responsibility has failed in Denmark with respect to a more restrictive smoking programme, more Me­diterra­nian countri­es have pro­hibited smoking in primary schools, and other coun­tries have introduced stronger smoke-ads restric­tions than we have.

One expert explained the limited political action against smoking by distinguishing between a disease inflicted on man by himself, ie. smoking, and a disease inflic­ted on man by nature, ie. a lung virus. The former is considered a minor epidemic evil than the latter. Therefore, no strong action against the high Danish smoking rate has been implemented.

To conclude on the Danish political effort of coming to grips with the high smoking rate, Parliament and Government are willing to change the population's knowled­ge, but not its habits of smo­king. Probably, it is in agree­ment with the attitu­de of most Danes that drinking, smoking, and eating are people's own busi­ness.

Instead of searching for political initiatives, it is more awarding to register the three types of campaigns conducted by the private non-profit organisa­tions since 1950.

The first type tries to prevent people from starting to smoke. This campaign takes, for instance, place among children and teen-agers. It has been calculated that around 70 % of all Danish pupils in primary schools receive educational material on health and tobacco-risks first and foremost from the Cancer Society [[13]](#endnote-14). Another example of this type of campaign is the Cancer Society's effort to introduce voluntarily smoking regula­tions for teachers in schools.

The second type of campaign tries to protect people from passive smoking. The Government's decision on prohibi­ting smoking in public buildings and indoor areas is an example of this.

The third type tries to provoke smokers to stop smoking. The Cancer Society has for example established a toll free phone line (80302011) to give smokers for informations on how to stop smoking. It is a successful initiative. But the line is too busy, so only one out of five calls is answered and time for talks is limi­ted.

Even if many of these campaigns can be described in their own context as succesful, "the immediate conclusion of these campaigns is that their message is understood, but not follo­wed, as no effect on smoking habits is to be measured up til now" [[14]](#endnote-15).

However, this conclusion is only one half of the truth. It is correct that we cannot trace any effect of anti-smoking cam­paigns on the number and type of cancer diseases. But as shown in table 6, there has been a signficant reduction, especially in the number of male smokers, and to some extent of female smokers, as well.

4. NUTRITION AT WORK

4.1 Relevant Patterns and Trends

In contrast to the comprehensive data on smoking and cancer due to the early establishment of the Danish Cancer Register in 1943, there is only little statistics on nutrition in Den­mark. Some experts explain this situation by the fact that Denmark as an agricul­tural self-sufficient state has experienced no starva­tion as Sweden and Norway and we have had no feeding problems in colonies as the UK. And witout any of these pro­blems we have had no stronger reason for nutrition statistics.

To day, the Danish nutrition statistics concentrate on either the total supply of food or on consumer statistics, household by household. But in 1985, a survey on the in­dividual nutri­tion situation was conducted [[15]](#endnote-16). However, even this ma­teri­al is biased. For instance, we lack information on privately culti­va­ted vege­tables, etc., on the waste during the prepara­tion of meals, on the way meals are cooked/prepared (with more or less butter, oil etc.), and on the waste from each meal. Moreover, out-of-home-eating data for Denmark do not exist, so we have no exact figures on the number, distribution, and organisation of cante­ens. So to a large extent we have to rely on tentati­ve data to picture the nutrition situation at work in Denmark.

4.1.1 Size of Households

However, precise data on the size of house­holds in Denmark are available, cfr table 7.

Table 7. Danish Population by Size of Household.

%. 1950 - 1991

|  |  |  |
| --- | --- | --- |
| Population in Hou­seholds | 1950 | 1991 |
| 1 Person | 5 | 15 |
| 2 Persons | 17 | 29 |
| 3 - | 22 | 20 |
| 4 - | 23 | 23 |
| 5 \_ | 15 | 8 |
| 6 or more | 8 | 5 |
| Total | 100 | 100 |
| Households in 1000 | 1.331 | 2.288 |
| Average number of per­sons per hou­sehold | 3.1 | 2.3 |

Source: Levevilkår i Danmark 1992, (Living Conditions in Denmark, 1992), p 44, table 4.1

From 1950 to 1991, there has been an increase in both the pro­portion of single households from 5 % to 15 % and of two- persons-households from 17 % to 29 %. One explanation of this development is the growing divor­ce rate. Another is the long lasting decrease in the number of babies born. Accordingly, larger families will decrease. A third is the wish among young persons to have their own aparte­ment etc. even if there is plenty of space at their folk's home. For whatever reason, single people with less time available will try to compensate by, among other things, buying food in canteens in stead of cooking it themselves and eating it alone at home.

4.1.2 Out-of-Home-Eating

The Danish "out-of-home-eating" statistics is, as said, spotty. It is, however, estimated that in 1987, the public mass ca­tering sector in Denmark consisted of 16.000 jobs, sold for 7 bil­lions DKK and served between 800.000 and 1.200.­000 meals a day [[16]](#endnote-17).

The nutrition experts agree on some out-of-home-eating trends: An increase in the number of road restaurants, for instance more "McDo­nald's" family restaurants, a reduction in the number of lunch restaura­nt because corporations no longer can deduct restaurant bills (a stop for "private eating at public cost"), a minor increase in the proportion of evening resta­ura­nts, and a growing importance of cante­ens now more consciously used to reflect the cor­porate culture, and finally a growing number of "meals-on-wheels" due to the aging Danish population. All in all, the trend goes to­wards more people eating out-of-home even if the total number of resturants are likely to decrease.

4.2 Extent, Distribution and Organisation of Canteens

The canteen sector is dominated by publicly owned canteens in hospitals, in secondary schools, in homes for children and elderly people, in the Armed Forces, in jails, etc. These institutions are not primarily engaged in serving food, and their clients, the canteen-goers, are mostly out of work.

In order to get an impression of the number of canteens in the Danish labor market, one survey from 1987 can be introdu­ced. Here the National Food Agency estima­ted that 2.170 pri­vate and public canteens served 148.800 canteen-goers, cfr. table 8.

Table 8. Danish Geographical Distribution of Estimated Canteens

%. 1987.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Area | Canteens | | Canteen-Goers | |
|  | N | % | N | % |
| Copenhagen area | 927 | 43 | 31.000 | 21 |
| Sjælland, | 388 | 17 | 22.800 | 15 |
| Born­holm | 2 | 1 | 1.200 | 1 |
| Fuen | 171 | 8 | 14.400 | 10 |
| Jutland | 682 | 31 | 79.400 | 53 |
| Total | 2.170 | 100 | 148.800 | 100 |

Source: Den danske Storkøkkensektor i tal, (The Danish Catering

Establishment in Figures), 1987, p 26, by National Food Agency

The geographical distribution with many more canteen-goers in Jutland than in the capital is probably correct, because Copenhagen offers more alter­native eating facili­ti­es than Jutland. But, the other figures are questioned by experts. For instance, the National Food Agency has registered two canteens on the island of Bornholm serving 1.200 users. Howe­ver, it is impos­sible to identify any private or public establ­ishment of that (great) size.

Another survey conduc­ted by Kanti­ne­ledernes Lands­forening, KL (the Danish Canteen Manager's Associa­tion) in 1992, may be more helpful. KL asked its 1.100 members, out of a potential of 3.500 canteens [[17]](#endnote-18), how many people they served, what type of food they offered, how much of the food they cooked themselves and how much industrial and prepared food they did buy, etc. 601 canteen-managers answered the qu­estionnaire and told that they served 143.489 canteen-goers. Given the number of 3.500 canteens in Denmark, it is possible to extrapolate from the 601 canteens with 143.489 users and then calculate that the 3.500 canteens may serve for up to 800.000 canteen-goers. This means that every fourth Dane at work may be a canteen-goer.

Still based upon the KL study, the distribution of cante­ens and canteen-goers by size of the canteens is shown in table 9.

Table 9. The Distribution of Canteens and Canteen-Goers by Size of Canteen

%. 1992.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Size of  Can­teen by Number of Canteen-Goers | Canteens | | Canteen-Goers | | Number of daily  Canteen-Goers |
|  | % | N | % | N | N |
| --> 199 | 67 | 401 | 22 | 31.413 | 78 |
| 200 - 399 | 19 | 115 | 25 | 35.490 | 309 |
| over 400 | 14 | 85 | 53 | 76.686 | 902 |
| Total | 100 | 601 | 100 | 143.489 | 239 |

Source: Unpublished material from Kantineledernes Landsklub, November 9, 1992

According to table 9, 67 % of all canteens in Denmark have less than 200 daily users and serve for 31.413 persons or 78 person

in average. Canteens with 200 to 399 daily users constitute

19 % of all canteens and have as an average 309 visitors a day, while only 14 % of all canteens serve more than 50 % of all canteen-goers with an average of 902 guests a day.

The equipment of canteens vary a lot. Of course, many kit­chens are well equipped. But many are not due to the modest Danish legislation. For instance, no refrigera­tors are requested according to Arbejds­miljøloven, the Work Environment Act. Moreover, the employer is in principle not obliged to provide a specific room where to eat or even a canteen. For instance, a table and a chair in your own office is sufficient according to the law as long as it isn't your desk, etc. What is needed, however, is a stove where to make a cup of coffee or heaten a meal.

Canteens are subsidized differently, but according to nutrition experts the following picture can be drawn.

1. The Govern­ment has decided not to subsidize any of its cante­ens, so the civil servants have to pay in full for food and service. However, indirectly Government supports their canteens by using long term unempl­oyed personnel to assist in the canteen and directly it pays for the canteen buil­ding/­room, the heat, water, etc.

2. Municipal institutions are more directly subsidized. Local authorithies are entitled to pay all the operating costs of their Cante­ens within their own budget. In fact, municipal hospitals receive sub­stantial amounts of money to cover the opera­ting costs of the canteen. So normally, the canteen-goer only pays food and drinks.

3. Canteens in private firms are normally subsidized in the way that manage­ment pay for decorating and operation of the cante­en whereas t­he employees pay for the food they consume and the staff who serve them. And employees have to pay for their food and drink. Otherwise, they will be taxed by the value of a free lunch.

4.2.1 Organisation of Catering

In all the visited canteens, the kitchen and the dining room were of a high standard. The dining rooms of these canteens were nicely painted in light colors, equipped with flowers/­plants and furnished with 4 - 6 tables for six to eight persons per table and arranged in minor groups creating an intimate at­mosphere.

Management will seldom inter­fere in the operating of the canteen or its menu. Sometimes employe­es have been asked their opinions. But their influence on the food/menu is quite limi­ted. So, the canteen manager decides the decorating, the organisa­tion, and the cooking, ie. the menu, all by himself.

However, management is not without influence. In some companies it has urged the canteen manager to express the aims of the canteen as seen from his point of view. So, on a regular basis, he has to report to his employers to what extent he has ac­complished the declared aims, etc. Here, the private canteens are managed in accordence with modern organi­sation theory.

4.2.2 The Typical Canteen-goer

In order to describe the typical Danish canteen-goer we have to recapitulate some of the previously shown tables. From table 1, we know that 69 % of all jobs in the Public sector are occupied by women and in contrast, 73 % of the Indu­strial jobs by men.

As the companies of the industri­al sector have fewer work places than those of the public sector, then it is estimated that the canteen inten­sity is higher in the latter sector that in the former. It means that more women than men will have an op­portunity to use cante­ens. Therefore, it is not unreasonable to suggest that the typical canteen user is a woman.

If the geographical distribution from table 8 is correct, Jutland has relatively more canteens than the rest of the country. Even so, it is reasonable to suggest that the female canteen-goer comes from the capital as it has more governmental institutions than Jutland.

Table 7 showed an increased in the proportions of 1 person and 2 persons households. Therefore, we may presume that the typical canteen-goer is a midd­leaged woman who may live alone or with only one more person, probably her child.

Finally, we know that people between 25 and 49 years old have the highest rate of occupatio­nal activity.

So, the typical canteen-goer is a women in Copenhagen living alone or only with one person more, her child or husband, and is between 25 and 49 years old.

A facinating element in this description is that the presumed female canteen-goer, if married, is eating healthy food in her canteen, while she probably makes a fat lunch box for her husband who is occupied in the private Industrial sector. She eats green, lean, and fibrous, he eats liver pate, salami, and whole fat cheese. No wonder that the expectations of life for Danish men are 72 years, but for women 78 years.

4.2.3 Quality/Price of Canteen Food

From the survey of the 601 canteens, it is possible to present a top ten list of the most often found items in canteens. First comes coffee followed by tea and lemonade, then open sandwiches on rye bread and a minor hot dish (without potatoes) again followed by something to drink: milk. Next are cheese, raw vege­tables, juice, and open sandwiches on white bread. So, the typical Danish lunch of food and drink is a cup of coffee and a dish with 3-4 open sandwiches. This is the tradi­tional Danish "fast food" menu.

But, new trends in canteens can be identified, ie. more green, lean, and fibres. Such programmes, if well initiated and pre­pared have most often turned into a succes [[18]](#endnote-19).

In another survey by KL conducted in 1992, 225 canteens serving 74.000 canteen-goers were asked about their daily menu. Of the more than 450 different types of dishes regi­stered, 63 % were with meat, 26 % with fish and 11 % were vega­tarian dishes [[19]](#endnote-20).

So, whatever type of meat, it can be estimated that 37 % (fish and green) of the daily dishes in Danish canteens are nutri­tious.

The cost of a full canteen meal with a drink and a full dish can be estimated to around 25.- DKK. But, the average canteen-goer will probably only use half that amount, because, it is estima­ted that every Dane only uses 33.- DKK for food. Besides, the canteen experts agreed that it is difficult to sell a full meal if the price exceeds 25.- DKK.

4.3 Cultural Habits and Change

"Eating is a social act. Eating is with us from the very beginning of life, and becomes part of our identity" [[20]](#endnote-21).

To eat is to be social, not the least in Denmark. For we love to eat and especially to eat together. It has been demonstrated that people if together eat relatively more than if isolated. So, the joy of eating is a basic Danish cul­tural aspect.

Another is our position as a self-sufficient agricul­tural state. Both things add up. Our appreci­ation for the dinner to which we have been invited is expressed by eating more and doing so we know that we support the agriculture sector.

4.3.1 Quality of Traditional Food

Traditionally, Denmark has been proud of the quality of its farming products. But lately, the quality of our product has been questioned. For instance, the two main export articles, bacon and butter have been characterized by an expert as neither healthy nor of high quality.

Nevertheless, Denmark is still a stronghold for agri­cul­tural pro­ducts as confirmed by the above mentioned food supply statistics even if new trends can be observed:

1. The Danes eat more meat especially more pork, and less potatoes, cabbage, and milk pro­ducts [[21]](#endnote-22).

2. The Danes have increased their consumption of fat. According to the 1985 survey, only ten % of the Danes ate fat as adviced offici­ally and the average fat procentage of our food was cal­culated to be 36 % [[22]](#endnote-23). In 1989, the same figure is said to be 43 % in spite of the bulk of information against fat [[23]](#endnote-24).

3. The Danes eat more internationally, ie. more ecsotic pro­ducts coming from all over the world, especially fruit and more other national dishes such as Italian or American food.

4.3.2 Eating Traditions and Social Class

The nutrition experts have critisized the fat Danish food for decades. But yesterday, it was the rich man who ate too much fat. To day, it is the unskil­led midd­leaged man living in the capital area, who eat too much fat [[24]](#endnote-25) and smoke too much, cfr. table 6.

The interesting observation here is that two thirds of the Danes are cons­cious of eating healthy food. Especially the younger genera­tion and the upper level salari­ed men and women have reduced their comsumption of fat [[25]](#endnote-26). Neverthe­less, this consciousness has not resulted in more healthy eating habits with for instance less fat, more green, and fibre-rich bread.

This tendency is noticed by the can­te­en mana­gers, as well. In general, women seem more willing to eat raw vege­tables than men. But this development towards more green moves slower than the shift towards more fiber-rich bread.

4.3.2.1 When Is the Main Meal ?

The experts agree that the main meal is the dinner in the evening and the main Danish menu is risolle or pork sausage with gravy and potatoes. At the same time, we have the fat lunch box culture, however gradually eroding. On an average, lunch is the most fat meal of all our daily meals, as 45 % of its ener­gy is fat [[26]](#endnote-27).

It has been suggested to place the dinner at noon and thereby make use of the canteen facilities and its probably healthier food than the dinner at home. However, Forbruger­styrel­sen, the Consumer Agency, had advocated a full meal in the evening in order to ensure that children will get suffici­ent food. So, a conflict of interest is obvious.

4.3.2.2 Healthier Food as a Public Issue

There is no doubt that healthier food is a "good story", or more precisely, poor or even dangerous food is nowadays "good stuff".

For instance, there has been some debate on the unhealthy use of too much salt and the population has been told to reduce it. More precisely, every Dane eat 15 g of salt a day. But accor­ding to nutrition specialist, 14 g is given each of us in the food pro­duced by industry. So we can only regulate 1 g of salt our­selves. It limits the possibi­lities for the individual consumer to improve his food.

4.4 Institutional Factors, Agents, and Policies of Reform

The nutrition experts mostly come from Government insti­tutions. The main agency is Forebyggelsesrådet, the Prevention Board who primarily has the task to inform the Danish popula­tion on how to avoid smoking, dangerous materials, unhealthy food, cfr. [[27]](#endnote-28). The other public agencies are in principle sub­ordinated to the Prevention Board. Forebyggelsesrådet is the advicer and even to some extent the spokesman for the Govern­ment. However, this presumed important position is not the case [[28]](#endnote-29).

On the contrary. In pratice, Government agencies have three problems as main agents for a nutri­tious policy program­me. First, their food experts are not taken seriou­sly by the politi­ci­ans. Second, they are not given the sufficient remedies (money) to initiate major programmes. Finally, they cannot prove any significant in­fluence on the Danish food consumption, ie. less fat, more green, etc.

Add to this that these agencies sometimes express opposite points of views. For instance, the Health Agency did warn parents against feeding their babies with too little fat and at the same time, the National Food Agency conducted a campaign against too much fat. Co-ordination is needed here.

5. CONCLUSION

"Co-ordination", is perhaps a good concluding word from which we can proceed further.

First, we shall coordinate the diagnosis. It is vital that all actors look upon health at work in a common perspective and identify the same problems. It means that Government agencies shall be more active and that all actors shall commu­nica­te mutual­ly and unambi­guously.

Another aspect of this coordination of diagnosis is that we shall move from focusing only on cancer causing ele­ments of smoking and to introducing cancer restraining factors, as well. As said by an expert,"Cancer causing factors are less important than cancer preven­ting elements for the inciden­ces of cancer".

Accordingly, the actual diagnoses have only been half the truth. In future, we need one full diagnosis made by experts, unions, politi­ci­ans, civil servants, etc.

Second, we shall present an individual prescription. We all know the ideal recipe for a healt­hier life. But life is risky. "If we remove all cancer, every person will only have extended his/­her life with two more years", an expert says. Perhaps the idealistic prescription has overlooked the importance of "the quality of life". But any presc­ription of remedi­es shall relate to each and every individual. An expert gave this formula­tion:­"It seems somewhat for­gotten that cancer is better beaten at work or at home than in the labora­tories". So, prescriptions have to be individual if succesful.

Third, evaluate the cure constantly. In spite of all the money spent on warning people, the amont of tobacco or of fat food have not been reduced. We should have aknowledged that some strategies failed while others succeeded and then have taken the consequ­en­ces. Maybe we did not dare to. But in future, each and every program­me/­policy should be mea­sured against its own aim.

This is even more important as our approach has changed. In the 1970s, we were interested in environment. In 1990s, in quality of life. Therefore we will have to change the key words from "no smoking" or "no fat" to "health, nutrition and lifestyle". It can only be done on a more open and individualised basis.

Henning Sørensen

6. LIST OF INTERVIEWS

Cancer

29.9.1992

Dr. med., Ass. Professor Tage Egsmose, Institute for Social Medicine, University of Copenhagen

11.9.1992

Senior vice president Peter Madsen, Scandinavian Tobacco Co

23.9.1992

Head of Information, Merete Strand, Danish Cancer Society

Cancer and nutrition

13.10.1992

Dr. med. E. B. Thorling, Department for Nutrition and cancer, Danish Cancer Society

Nutrition

24.9.1992

Mag. scient. soc. Margit Groth, National Food Agency

18.9.1992

Ph.D. Johanne Haraldsdottir, Research Institute for Human Nutrition, The Veterinary and Agricultural University

23.9.1992

Director Jørgen Højmark Jensen, Municipal Food Control Unit of Copenhagen

30.10.1992

Ph.D., director Orla Zinck, Danish Catering Center

Canteen

23.9.1992

Lars Sonne-Hansen, Danish Cancer Society

13.10.1992

E.B. Thorling, Århus Kommunehospital

7.11.1992

Svend Aage Lassen, Scandinavian Tobacco Co

9.11.1992

Mogens Sørensen

HK (Salaried Employees Union)

Contact/Phone Interviews

Åse Olesen, Chair of Social Commission, former minister of Social Affairs

Erling Olsen, Municipal Hospital of Copenhagen, Nutrition and Physiological Lab.

Sisse Fagt, National Food Agency

Elisabet Helsing, WHO, Regional Officer for Nutrition

1. 7. NOTES

   . Dansk Institut for klinisk Epidemiologi, DIKE (Danish Institute for Clinical Epidemiology), Danskernes rygevaner (The Danes' Smoking Habits), Copenhagen 1992: Danish Cancer Society, Introduction [↑](#endnote-ref-2)
2. . Danish Cancer Society, OBS på kræftfarlige stoffer (NB on Cancer Dangerous Materials), Copenhagen 1992, p 1, pamphlet [↑](#endnote-ref-3)
3. . OBS, opcit, p 32 [↑](#endnote-ref-4)
4. . OBS, op.cit., p 32 [↑](#endnote-ref-5)
5. . OBS, op.cit, p 1 [↑](#endnote-ref-6)
6. . Cfr. the WHO declaration from April 7, 1948, ratified by Denmark. [↑](#endnote-ref-7)
7. . Annual Report 1991, op.cit., p 33 [↑](#endnote-ref-8)
8. . Danskernes Rygevaner, op.cit., 1992, p 22 [↑](#endnote-ref-9)
9. . Dike, op. cit., p 28 [↑](#endnote-ref-10)
10. . Annual Report, 1992, op.cit., pp 58, the fortune of the Danish Cancer Society is 37¤ of a mia DKK, [↑](#endnote-ref-11)
11. . Annual Report, op.cit., p 20:"A Swedish-American survey ..has demonstrated that the personal needs of the cancer patients often are neglected" [↑](#endnote-ref-12)
12. . Socialdemokratiet (Labor Party) December 3, 1970, on restriction on Tobacco ads. Kristeligt Folkeparti February 5, 1981 on pro­hibition of tobacco ads. Radikale Venstre February 13, 1986 on anti-smoking areas. This bill was turned down in Parliament on May 26, 1987. Socialistisk Folkeparti October 29, 1987 on anti-smoking areas and risk labelling of cigaret­tes. Radikale Venstre November 5, 1987 on the same two sub­jects. Finally the Government's proposal based upon the EC directive of May 17, 1990 on risk labelling of cigarettes and a reduction of the tar content. The bill passed in Parliament on May 29, 1990. [↑](#endnote-ref-13)
13. . Danish Cancer Society, Årsberetning, op.cit., p 9:"13.500 classes or 270.000 pupils receive educational material from the Danish Cancer Society" [↑](#endnote-ref-14)
14. . Dike, op.cit., p 31 [↑](#endnote-ref-15)
15. . Johanna Haraldsdottir m.fl., Danskernes kostvaner 1985, Hovedresultater (Da­nish Nutrition Habits), Copenhagen 1987: Levnedsmiddel­styrelsen (National Food Agency), [↑](#endnote-ref-16)
16. . WHO, Opportunities for Better Nutrition Through Mass Catering, Copenhagen 1987, paper, p 3 and Mikkelsen, op. cit., back page [↑](#endnote-ref-17)
17. . The estimate of 3.500 Danish canteens for occupational active persons are of course tentative. Partly, it is based upon interviews with canteen managers and partly upon the number of canteens obliged to pay for the supervising of the Food Control Units all over Denmark. [↑](#endnote-ref-18)
18. . Kantinerapport, et tilbud om en mere grøn, grov og mager frokost (Canteen-Report, an Offer of more Green, Fiber-rich and Leaner Lunch), København 1990:"København Sund By", p 30 og Dorte Majaard Larsen & Ayo Kit Olesen, Kost på arbejdet (Food at Work), København: 1991. Both reports are surveys of respec­tivly ten and three Copenhagen-based public and private

    establ­ishments. [↑](#endnote-ref-19)
19. . Kantinen 10, October 1992, p 33 - 36 [↑](#endnote-ref-20)
20. . WHO, op.cit., p 4 [↑](#endnote-ref-21)
21. . Levevilkår i Danmark 1992 (Living Conditions in Denmark), p 95, table 5.34 [↑](#endnote-ref-22)
22. . Haraldsdottir, op.cit., vol II, 1987, table 3.3.3 [↑](#endnote-ref-23)
23. . Sisse Fagt og Margit Groth, Udviklingen i danskernes fødevareforbrug, Copenhagen 1992, forthcoming. The book is a follow-up of the 1987 book, cfr. note 15 [↑](#endnote-ref-24)
24. . Fagt & Groth, 1992 forthcoming, op.cit. [↑](#endnote-ref-25)
25. . M. Rasmussen, M. Osler and H. Brønnum-Hansen, Voksne dan­skeres kostbevidsthed (The Cons­ciousness of Nutrition Among Grown-Up Danes), Ugeskrift for læger 1990, 152/22: 1577-1580.

    60 % of the Danes try to avoid unhealthy food, especi­ally women and men between 25 and 44 years of age and women salaried in the upper level eat healthy. [↑](#endnote-ref-26)
26. . Haraldsdottir 1987, op.cit., table 2.8 [↑](#endnote-ref-27)
27. . Komiteen for Sundhedsop­lysning, Regeringens Forebyggelses­pro­gram - programdel for Sundheds­ministeriet (The Government's Prevention Programmes), Copenhagen 1989, del I og II, (vol I and II). [↑](#endnote-ref-28)
28. . In 1989, on behalf of the Government, the Prevention Board suggested in its report centralized economy with fixed prices of healthy food. But, it is clear to everybody that the Danish conservative-liberal Government will never dream of regulating the prices in the open market economy. Therefore, the Board may recommend whatever initiative and be supported verbally by Government, but the latter will never act accordingly. [↑](#endnote-ref-29)