Case study of a healthy eating intervention for Swedish lorry drivers

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Abstract

Professional drivers, i.e. lorry, truck, bus and taxi drivers, have been identified as a particular health risk group. An intervention to study the efficacy of a series of educational programmes, involving improved nutritional balance in meals served, food preparation routines and carrying out personal health profiles on staff, was implemented at a Swedish truck stop in order to target this specific hard-to-reach risk group. Professional drivers were targeted through an information campaign, healthier ‘Today’s Special’ choices and by using staff as proxy health promoters. A campaign emblem on the menu notice board indicated healthier food choice menu items. Drivers choosing healthier alternatives were given lottery tokens. The intervention was evaluated through nutritional analyses, field observations, questionnaires and interviews. Positive staff-level outcomes included increased nutritional awareness, personal health empowerment and, most crucially, overwhelming staff support for a health-promoting role. Nutritional analysis of pre- and post-intervention ‘Today’s Specials’ showed a better balance of fat, calories, carbohydrates and protein (per 100 g) content in the dishes tested. At management level there were economic benefits in terms of time savings and reduced use of cooking fat in food preparation.

Drivers tended to choose healthier alternatives and there was increased awareness of the healthier alternatives on offer. The case study showed that using truck stop staff as proxy health promoters offers a viable intervention strategy.

Introduction

Professional drivers, i.e. lorry, truck, bus and taxi drivers, have been identified as a particular health risk group. This is true for both long- and short-haul drivers. Unusually, for such a large workforce (in Sweden there are approximately 70,000 professional drivers), their workplace is not shared. Colleagues are met at headquarters, depots and truck stops, but once on the road the driver is left to his own devices. While professional drivers might be an easily defined target group for health promotion, they can prove difficult to reach. However, their particular lifestyle and working habits make large numbers of drivers accessible through truck stops. This research describes a case study where direct and indirect intervention strategies, targeting the eating habits of Swedish professional drivers passing through a truck stop 200 km north of Stockholm on European highway number 4 (E4), were tested.

Compared to the average Swede, professional drivers exhibit raised consumption of coffee, French fries, sausages and milk fat. They also eat less fruit, vegetables, fish and cooking oil (Hedberg \textit{et al.}, 1993). Swedish urban bus drivers have increased risk of myocardial infarction (Alfredsson \textit{et al.}, 1993). Taxi and lorry drivers exhibit similar, but varying risks, depending on location and

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whether they are long- or short-haul drivers (Gustafsson et al., 1996). A study in the northern counties of Sweden, where most of the driving is long-haul, showed that subjects in a cohort of 440 drivers, when compared with 1000 referents, were overweight, were smokers, tended to work in shifts, were sedentary in their leisure time, and had a work situation characterized by high demands, low decision latitude and low social support (Hedberg et al., 1993). The picture from Japan is the same with drivers, compared to controls, significantly lower on a series of lifestyle indicators including nutritional intake, daily walking, sports activity and sleeping hours (Hara et al., 1998). While the particular lifestyle of drivers does appear to be a factor in their health profile, the occupation of driving itself is also a major contributor to drivers’ increased health risk. Lack of recovery time between shifts (Sluiter et al., 1999), work demands (Vanderbeek et al., 1994; Vanderbeek and Fringsdressen, 1995) and, particularly, stress have been shown to be associated with increased health risks (Vanderbeek et al., 1998). The psycho-physiological indicators of increased stress levels are well documented (Johansson et al., 1998; Kuiper et al., 1998). These factors include sleep disorder, particularly for long-haul drivers (Stoohs et al., 1995). The stress factor is also cumulative, with hypertension increasing with years on the job (Ragland et al., 1997). Professional drivers also suffer an effort–reward imbalance at work, which also contributes to their relative ill-health (Geissler and Siegrist, 1998). Other studies have pointed to environmental risk factors such as exhaust fumes, particularly for urban drivers (Borgia et al., 1994; Jakobsson et al., 1997; Hansen et al., 1998).

What then of health interventions targeting professional drivers? Emdad et al. (Emdad et al., 1998) comment on the scarcity of published studies of the effects of cardiac counseling among professional drivers. They studied the effects of risk factor counseling (Body Mass Index and smoking) for male professional drivers. While some positive effects were recorded for increased physical activity, smoking behavior was not affected. They concluded that exposure to occupational stressors in combination with low availability of social attachment outside work could contribute to maintenance of maladaptive behavior. Another Swedish study (Hedberg et al., 1998), comparing programmes for reducing risk indicators of heart diseases among male professional drivers, showed some reduction in health risks. The most common obstacle to lifestyle change was variable working hours. Unfortunately, variable working hours would seem to be one of the defining parameters of the occupation of professional drivers. Hellenius et al. (Hellenius et al., 1993) have shown that exercise regimes and changes in diet are equally effective in the reduction of cardiovascular risk factors in 35- to 60-year-old healthy men. Using focus groups in a sample of 46 Scottish lorry drivers, Jack et al. (Jack et al., 1998) have shown that eating at work was ‘characterized by a pattern of extensive and irregular snacking’. The snack foods tended to be branded items from garage kiosks, forecourts, motorway service areas and truck stops. Fruit was perceived as ‘healthy’, but did not figure highly in subjects’ diets. They conclude that their study ‘identifies a major role to be played by the roadside catering and retailing industries in supplying healthy snacks to their customers.’ This then is the starting point for the research reported here.

While our research was planned in a number of phases, we regard the general strategy as a form of educational intervention where the goal was to create an atmosphere of health-promoting awareness. The intervention tested was built on an ecological model with emphasis on multiple levels of influence (Newes-Adeyi et al., 2000) and changes in social networks (Howell et al., 1994) as restaurant staff were supposed to became more active as proxy health promoters. Three intervention levels, a series of outcome expectations and intervention strategies are shown in Table I. The supposition was that a multi-dimensional strategy, incorporating a combination of intervention strategies, would lead to positive intervention outcomes.
Aims

The case study reported here is an extension of the ‘Roadside Restaurant Project’ initiated by the Swedish National Food Administration (Karlénn-Nilsson, 1997). That project targeted professional drivers passing through participating truck stops in 11 counties (of 29 Swedish counties—participation was voluntary), over a 3-year period. It was decided to study a specific truck stop in order to scrutinize drivers’ habits and eating patterns, and to test the viability of a number of interventions strategies, with the specific intention of targeting this otherwise hard to reach risk group.

The research questions were:

1. What was the actual food-choice behavior of professional drivers’?

2. Would dedicated personal health profiling coupled with an educational programme increase (a) staff’s personal health awareness and (b) their willingness to act as proxy health promoters?

3. Would the educational programme (including advice with regard to food preparation) lead to the nutritional content (i.e. fat, calories, carbohydrates and protein) of the most frequently sold meals at the truck stop before and after the intervention, being better balanced according to the Swedish Nutrition Recommendations (National Food Administration, 1989)?

Description of participating truck stop

The truck stop was located in one of the counties that had agreed to participate in the Roadside Restaurant Project. Normally the project would have been administered by county council officers (from participating counties). The county where the project took place was an exception. Here, the Department of Health Promotion at the University administered the project. The participating truck stop, an opportunity sample, was located near the university and met criteria for a typical Swedish truck stop. It is open 24 hours a day, is located at a countryside crossroads in a green-belt area, 27 km (south) and 50 km (north) distant from the nearest towns. Nearest truck stops are 30 km south and 20 km north. At the time of the intervention the truck stop had a daily through-flow of 500–600 customers. Most of these customers were professional drivers. The truck stop was owner managed by a husband and wife, the husband being a former professional lorry driver, with about 30 staff (some part-time and some seasonal) varying in age from 17 to 60. The kitchen was managed by a female head chef. Kitchen and counter staff interchange. These aspects were important for the planning and success of the intervention. Of particular importance was the fact that the owner/manager was an ex-driver. From the outset, he understood the intervention philosophy, appreciated the need for such an intervention among the target group (his former peers) and was generally supportive at all stages. This support included support-in-kind to match seed funding, which was allocated by the National Food Administration and our University.

### Table I. Intervention level, applied intervention theory and expected outcomes

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<thead>
<tr>
<th>Intervention level</th>
<th>Underlying theory</th>
<th>Expected outcomes</th>
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<tr>
<td>Truck stop staff</td>
<td>preventive</td>
<td>increased nutritional awareness</td>
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<td>preventive self-empowerment</td>
<td>personal health empowerment</td>
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<td>governmental</td>
<td>health-promoting role</td>
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<td>Truck drivers</td>
<td>preventive self-empowerment</td>
<td>information penetration</td>
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<td>governmental</td>
<td>healthier food choices</td>
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<td>Menu</td>
<td>governmental</td>
<td>better nutritional balance</td>
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### Intervention strategy

The intervention strategy was both direct, targeting drivers through an information campaign and by offering healthy-food-choice alternatives, and
indirect through menu changes (its presentation and content), changes in food content and through encouraging the staff to influence the ambience of the truck stop by making it more or less health promoting. The intervention was also multi-method, involving awareness-raising of staff, both in terms of personal health as well as imbuing them with a health-promoting philosophy, training in food-preparation skills, better balancing of nutritional content of common ‘Today’s Special’ dishes and a specialized information campaign. A pedagogical unknown in this strategy was the extent to which we would be able to enlist staff as ‘health promoters’ both by proxy and through increasing their general health awareness. Were staff to find the intervention intrusive, ridiculous, unnecessary or misplaced, then it might run the risk of reversing the goals of the planned intervention. The strategy may also be termed an educational intervention where the intention was to try and change ‘the atmosphere’ of a truck stop—to turn it into a health-promoting arena instead of being the forecourt ‘tuck shop’ [as described by Jack et al. (Jack et al., 1998)]. The direct, primary-level intervention, i.e. truck drivers, also included a system of incentives for drivers making healthier food choices. This was organized by the National Food Administration through the drivers’ union newspaper (Karlén-Nilsson, 1997). Drivers could gather tokens for each healthy food choice made at participating truck stops. A system of prizes and a lottery based on the number of tokens gathers was part of the national campaign. Different times frames overlapped in the various stages of the intervention. The national campaign ran for 3 years (beginning 1996). The observation and baseline studies were carried out in 1997 and 1998. The educational programmes began in 1997. Staff questionnaires and nutritional analyses were before and after this phase (6-month interval for staff questionnaire, 4-month interval for nutritional analyses and 1-year interval for cooking fat consumption).

Educational programme
The staff intervention was planned as a series of educational programmes including carrying out a personal health profile assessment on each staff member. The first phase of the staff intervention was an introduction for management (‘Management Introduction’). This included participation by the head chef in a special course arranged by the National Food Board. The staff programme had the broad aim of enlisting the truck stop staff as proxy health promoters. The educational philosophy behind this was straightforward. Increasing the personal health awareness of staff would lead to staff showing responsibility for the health through encouraging healthier food choices of the target group. In order to encourage staff awareness, they participated in a theoretical nutritional analysis of the complete menu on offer using a computer-based analysis programme. Two further phases were included in the staff intervention. First, they were invited for an individual assessment of their own health status ‘Personal Health Profile Assessment’ and later, at the conclusion of the intervention period, a ‘Follow-up Programme’ was conducted. This follow-up involved assessment of various outcome measures through questionnaires and group interviews. The dynamic of these strategies, with regard to the target group, may be described as a ‘planned trickle-down effect’ (Kauffman, 1989; Ragone, 1996).

Motivation strategies
The targeting of truck drivers by the National Food Administration campaign involved various leaflets, including a cardboard cut-out model of a truck driver who had information leaflets in the breast pocket of his dungarees. For a period, a group of students from our department carried out an experiment using a touch-screen computer to help volunteer drivers carry out a simple, ICT-based, lifestyle analysis. This activity can be seen as part of the attempt to encourage health awareness ecology in the truck stop. Truck drivers were targeted directly through the offers of a healthier alternative on each ‘Today’s Special’ menu, indicated by a campaign emblem on the menu notice board. Drivers who choose the healthier alternative were given a token. These tokens could be collected in order to claim various incentives,
T-shirts, etc., and to be included in a lottery for other prizes.

The main outcome at menu-level was that increased awareness on the part of kitchen staff would result in a healthier nutritional content in a series of ‘Today’s Special’ menus. We also expected, as a possible indirect outcome, that fat usage in the preparation of meals would be significantly reduced, this goal having been emphasized as part of the educational program.

**Empirical data**

Data for this study were gathered at various intervals between October 1996 and May 1998. Measures included longitudinal nutritional analysis of the four most frequently sold samples of ‘Today’s Special’ dishes, non-participant observation of drivers’ food-choice behavior and interviews with staff (individual and group), management and the drivers themselves. Cooking fat use (measured by purchase invoices) was compared for two 4-month periods, covering the same season of 3 consecutive years before and after the intervention.

**Field observations—drivers actual food-choice behavior**

In the first period of the intervention a series of non-participant observations were made in order to establish baseline information on how and what the drivers choose from the menu. As the intervention progressed more and more (34) of the total number of dishes (88) were composed according to the Nordic Nutrition Recommendations. These 34 dishes were the ‘healthy alternative’. At least one or two of the healthy alternatives were included in the ‘Today’s Special’ menu for the intervention period. An extra incentive, health promoting in itself, for drivers choosing the healthier alternative was to give them a piece of fruit to bring with them on their continuing journey. At the follow-up stage of the data gathering, staff were asked to observe how the drivers were behaving in their food-choice behavior. The results reported here are derived from a series of unpublished reports presented throughout the period of the project. [These reports are available from the Library, University of Gävle, Sweden (in Swedish)]. Drivers’ food-choice behavior and attitudes were studied through systematic field observation, questionnaires and structured interviews. The food-choice behavior of a random field sample of 60 drivers was observed. Drivers were chosen from those visiting the restaurant on Tuesdays and Thursdays between 3 and 6 p.m., these being the weekdays and times that most drivers visited the restaurant (according to the owners). Of these, 30 were observed more extensively with regard to their behavior on entering the restaurant, and how and where they choose to sit when eating. Eight of the subsample were subsequently approached and all agreed to be interviewed with regard to how they perceived their own food-choice behavior. Another sample \((n = 60)\) was administered by staff members who had been asked to hand questionnaires to drivers who fulfilled the following criteria: they should be professional drivers, regular visitors and willing to complete the questionnaire. Sixty drivers visiting the truck stop between 3 and 6 p.m. on Tuesday (15) and Thursday (15) in 2 consecutive weeks were included in a quota sample (i.e. the first 15 drivers meeting the sampling criteria). Staff estimated non-response (by refusal) to be about 10%. (This would seem to indicate a very small number of regular drivers. It should not be forgotten that the location is at a major thoroughfare and that interpretation of being ‘regular’ was left up to staff.) Respondents were given the choice of being anonymous. Those who wished to could indicate that they were willing to be interviewed. A criterion of eating at the truck stop at least twice a week was used to select 18 drivers, out of 28 who were willing to be interviewed. Telephone interviews were conducted with this group.

The ‘typical driver’ \((n = 60)\) was a middle-aged male, average age, 41 years. One driver was female. Two-thirds of the drivers were married or co-habiting. All of these drivers, except one, drove heavy lorries and/or articulated trucks. Sixty percent of these were exclusively long-haulers, of which three were continually on international routes. Most drivers worked varying shifts with
only three drivers working days only. This picture provides a good indication of the typical professional driving clientele of this kind of truck stop.

Interviews—staff health awareness
Structured interviews were conducted with management, staff and drivers at various stages throughout the intervention period. In addition to these interviews, many informal exchanges of information took place. These might have been between the field observers and some of the drivers they were studying, or between drivers and the students who carried out the ICT experiment.

Questionnaires and interviews—willingness to encourage and encouragement
Staffs were also asked to complete pre- and post-intervention questionnaires. The questionnaires were aimed at studying any changes in staff perceptions with regard to the nutritional content of the dishes, their own health awareness, their perceptions of the drivers’ interest in the campaign and their willingness to act as proxy health promoters. Information on staff responses was gathered through a series of interviews (n = 15) carried out in conjunction with the staff-level intervention. Seventeen members of staff, including management, participated more or less in the various phases.

Nutritional analysis
The total number of dishes from which the restaurant composed the daily menu was 88. The four most frequently sold dishes, Hamburger Beef with Potatoes, Fried Teacake with Sausage and Egg, Pasta and Mincemeat Sauce and Sausage Stroganoff and Rice, were analyzed for fat, carbohydrate, protein and calorie content before and after the intervention period. An accredited scientific laboratory conducted this analysis. Kitchen staff were not taught to prepare these dishes specifically. The expectation was that the nutritional composition of these dishes would be improved because of the educational programmes.

Intervention outcomes are described according to the layout of Table II.

Results
On the average, drivers ate four meals per week at a truck stop with a range of from ‘almost never’ to 12 meals a week. Over 80% of these meals were described as the drivers’ main meal of the day.

Typical food-choice behavior
This has been summarized (Johansson, 1997) succinctly, as follows:

The typical drivers comes straight from his lorry and enters the restaurant after a quick stop in the washroom. He knows beforehand that the Day’s Special is usually very good so he looks only at the ‘special’ menu. If one of the dishes tempts him he takes a tray, two slices of hard bread, a pat of light margarine and a quarter liter carton of milk. He orders the Day’s Special at the counter and if none of the dishes are to his liking he orders ‘Pytt i Panna’ (a Swedish favorite of diced and fried potatoes, sausage and onions, topped with a fried egg and garnished with beetroot preserve). He pays, looks for a friend or acquaintance to sit with, goes and sits. He likes to eat in company. He doesn’t rush when eating. Rather, he uses the time to relax. After his meal, he collects a cup of coffee, black, without sugar. He then returns to his lorry and drives on. [Our translation]

This baseline information gives a picture of the target for the intervention set in the context of a typical truck stop. A further piece of critical information comes from interviews with the drivers. Truckers have a collective awareness of themselves as a risk group. However, in general, this risk awareness is not reflected in their choice of food or choice of where to consume it. In this aspect their choices are more down to earth, quality, taste and price, and the opportunity to eat in company are the prime influences. The interviewees indicated that a highly sensitive ‘jungle telegraph’ was in action. If a truck stop changed hands, management or policy in any way which had a negative impact, drivers would collectively abandon it. The professionalism of the truck stop...
studied here emerged clearly from the interviews. It was also obvious that these drivers led a more sedentary lifestyle when compared with average Swedes. Compared with earlier studies, where three-quarters of interviewed drivers aspired to change their eating habits (Lindvall, 1995), a little over half our group wished to do so. While interviewees acknowledged stress as a recurring element of their working day, these drivers seemed to accept it as an inevitable part of the truck driver’s life.

Nutrition content

Analyses (Table III) of the constituents of the four most frequently sold meals show changes before and after the intervention. Three of four meals had fewer calories and less fat after the program, positive changes, while one meal had more calories and fat after the program, a negative change. However, overall, in the judgment of the independent scientific laboratory that carried out the tests, the nutrition balance in the assessed meals (analyses of fat, calories, carbohydrates and protein) was better composed when compared with the Swedish nutrition recommendations.

Interviews with drivers showed that they were more inclined to choose from the signposted healthier alternatives. In addition, the food on offer, besides having a composition more in keeping with nutritional recommendations, was also shown to have been prepared with significantly reduced amounts of cooking fat.

Staff-level outcomes

Results from questionnaires and interviews with staff show a number of staff-level outcomes including factors such as increased nutritional awareness ‘I’m more aware now of what I’m eating’, personal health empowerment ‘I’m more interested now…and at home, now after the education program… I use much less fat’ and, most crucially, staff’s willingness to adopt a health-promoting role. In each of these areas, the educational programme had the expected outcome. Kitchen staff clearly took on board the notion of reducing fat and creating ‘healthier’ menu alternatives. As an example, before the intervention 60% of the staff thought that ‘Today’s Special’ was too fat ‘very often’ or ‘often’, while after the intervention only 20% of the staff thought so. We take this as evidence for greater awareness of nutritional content. While the impact of personal health empowerment was difficult to measure, there is no doubt from follow-up interviews that

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<td>Management introduction/food preparation education</td>
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<td>Follow-up programme</td>
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<td>Education, how to pedagogically encourage drivers to make healthier food choices</td>
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<td>Health profile assessment</td>
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<td>Leaflets</td>
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SNR = Swedish nutritional recommendations.
staff understood, accepted and became active in a health-promoting role directed specifically at the target group. As one staff member remarked in an interview: ‘many of the big [showing a huge stomach with her hand]…you know those big guys who used to take fried sandwich have begun to take salad instead…and we encourage them’. Staff’s actions in this regard were studied by field observations of their interactions with the drivers.

**Discussion**

Health promotion through educational interventions in the general population, even at the best of times, is a difficult goal to achieve. When interventions are aimed at specific risk groups, new difficulties arise. When the risk group is easy to define, but difficult to reach, special measures have to be adopted. Lorry drivers fit this description. The key conclusion from the case study reported here is that proxy health promoters in the guise of truck stop staff can be used to reach this difficult target population. Using proxy health promoters/educators offers new possibilities for health promotion. Serra-Majem *et al.* (Serra-Majem *et al.*, 1999), in a project aimed at modifying food behaviors, report the enlisting of GPs as ‘nutrition educators’. Using GPs is not quite the same thing as using truck stop staff. However, since we have shown that drivers are aware of their own risk status, we believe that this makes them amenable to the kind of health promotion described. Our observation studies and interviews have shown that professional drivers regard the truck stop as more than an occasion to eat. Drivers are creatures of habit and return regularly to the same stop. A positive ambience and opportunities for meeting fellow drivers are key reasons for halting at a particular truck stop. This is important, since irregular working hours, the normal situation for professional drivers, has been shown to be a significant barrier to dietary change (Holgado *et al.*, 2000). None of our interview subjects and no observation report of interactions between staff and drivers spoke of negative responses to the intervention. In other words, drivers were receptive. Even one negative response might have been enough for management to abandon their role. The opposite was the case. The intervention ‘sold itself’—receptive drivers, encouraging staff, better food preparation practices, reduced fat, and financial savings in goods and labor. Creating opportunities for a supportive environment is an obvious prerequisite to establishing a supportive environment.

A secondary effect was revealed: gross cooking fat use was compared for two 4-month periods before and after the intervention, showing a 26% reduction (280 kg in 4 months, corresponding to savings of 1900EUR, 1998 prices). Changes in food preparation routines also resulted in time savings. Because of efficiencies in food preparation, we have calculated an annual wages cost saving of 7450EUR. These proven changes reveal a powerful intervention mechanism at management level. Healthier habits can save money!

There is of course a downside—at what cost? Cost–benefit ratios for this kind of intervention have to be based on long-term intervention effects in order for changes in habits, attitudes and

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<td>Before</td>
<td>After</td>
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<tr>
<td>Hamburger beef with potatoes</td>
<td>8.6</td>
<td>2.1</td>
<td>150</td>
<td>95</td>
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<tr>
<td>Fried teacake with sausage and egg</td>
<td>13.1</td>
<td>9.6</td>
<td>230</td>
<td>178</td>
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<tr>
<td>Pasta and mincemeat sauce</td>
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<td>2.1</td>
<td>110</td>
<td>92</td>
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<tr>
<td>Sausage stroganoff and rice</td>
<td>4.6</td>
<td>7.5</td>
<td>120</td>
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awareness to become deeply rooted for target drivers and supporting staff. We have not estimated the man-hours involved. While this might be possible, it would be difficult to assess the psychosocial impact of the various day-to-day goings-on. These included visits from university students and staff, attendance at meetings, and other non-quantifiable casual interactions. How much time and effort would be needed to enroll kitchen and waiting staff as health promoters? Crucial to the kind of intervention we have described is the notion of the ‘specialness’ of the target group. This is maintained even by the architecture of many truck stops, where professional drivers often have a lounge of their own. In addition, because drivers are often regulars, it is likely that trusting relationships could be built up with staff. Many of the tasks carried out by students and staff from our University can be replicated at little or no cost. Drivers unions and restaurant chains would also benefit from this kind of intervention. Since changing dietary habits has been shown to be easier to achieve than changes in exercise regime (Madsen et al., 1993; Kumpusalo et al., 1996) and based on the positive response from drivers, we conclude that truck stop interventions offer a suitable locale for targeted interventions. The driver who reported his personal risk indicator as ‘when my belly reaches the wheel’ wants to be helped to change his diet. With the help of a straightforward educational programme and a minimum of personal health literacy (Rogers et al., 2001) truck stop staff are willing to help him (and her) by encouraging healthier food choices and by using healthier alternatives in their preparation of the food they present.

Any intervention has to be planned, implemented and evaluated over a limited period of time. Our intervention was carried on for 3 years—enough time to be able to observe significant changes, but too short to observe permanent post-intervention effects. However, the study does illustrate that interventions targeting a hard to reach group can work. Further study needs to be done on possible long-term effects of healthy eating interventions.

Conclusion

We conclude that the multi-level, multi-method programme presented in this case study offers a model for reaching a specific, hard-to-reach risk group. Two steps are crucial in our estimation. The first is the general education of restaurant staff in healthier food preparation. The second revolves around the use of truck stop staff as proxy health promoters for their key customers, i.e. professional drivers. While this project had the specific aim of promoting healthy eating, it is our opinion that truck stop interventions, using staff as proxy promoters, offers a suitable strategy for targeting other health risks associated with professional drivers.

Acknowledgements

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