

Planetary Health Diet

Promoting a sustainable plant-based diet among adolescents and young adults (part 2)

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Abstract

Up to now communication campaigns for the promotion of sustainable eating habits which were designed to address the target group of adolescents and young adults – particularly those from a low-educational background – are lacking. The results of a quantitative study (part 1) indicated that biodiversity, global food security, and personal health represent relevant reasons for this group to change their behavior. On this basis and in line with the communication campaign model of Bonfadelli and Friemel, goals and strategies for campaigns were developed. In particular, consideration was given to the fact that consumption of pulses as an alternative to meat should be increased. The preconditions for this are an expectation of self-efficacy and the result expectation that a plant-based diet can have positive effects on health and the environment.

Keywords: planetary health diet, nutrition communication, behavioral change, adolescents, young adults, sustainability, public health nutrition, plant-based diet

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Theoretical Background

Achieving approaches to sustainable plant-based dietary patterns along the lines of the planetary health diet (PHD) will require changes to eating habits among the target group of adolescents and young adults – especially those from low-educational backgrounds [1, 2] (part 1 of the article in ERNÄHRUNGS UMSCHAU 5/2022). Specifically, an urgent need for action was shown in terms of promoting the regular consumption of vegetables, pulses and fruit, the consumption of pulses as an alternative to meat, and the consumption of wholemeal products [2].

Addressing this target group holds enormous potential since it is in this phase of life that nutritional habits are established which are very likely to be retained for a lifetime [3]. In addition, events such as the transition to working life also bring changes to everyday habits. Such phases of change can be used to encourage additional changes in eating habits, which then become established along with the other new habits [3]. Communication measures at population level make an important contribution to encouraging changes in eating habits [4], but up to now the impact on young people, especially those from low-educational backgrounds, has been very limited [5, 6]. One reason for this is that this target group is often distinguished by a strong concentration on the present, spontaneity and experience-oriented action, whilst future-oriented action – such as healthy eating habits – tend to have only a subordinate place in their world view. Risk of disease often seems far removed to them, which is why health prevention measures are rarely taken, even if the risks of their own behavior are known [5]. Although environmental protection is seen by most young people – regardless of educational status – as an important, emotional topic, for many this has not yet had any behavioral impact [7].

The process-oriented system model of communication campaigns by Bonfadelli and

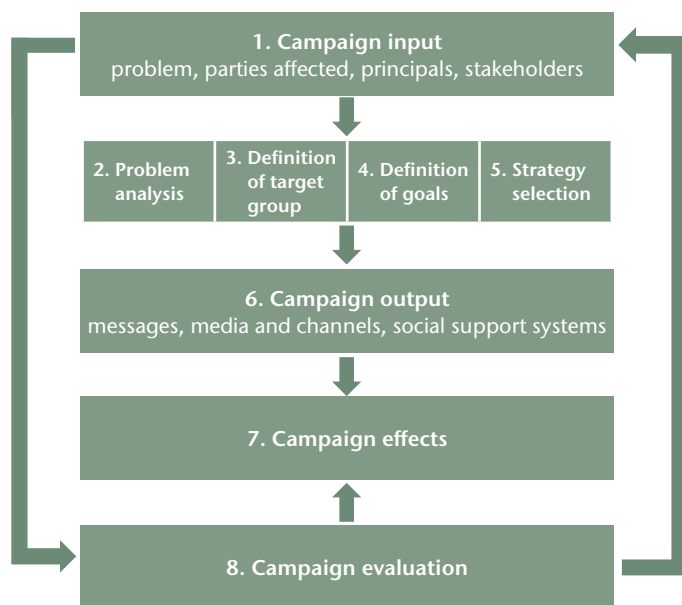


Fig. 1: **System model of communication campaigns** (based on [4])

Friemel [4] can help in designing effective target group-oriented campaigns and describes eight process steps for the planning and implementation of a successful campaign (♦ Figure 1). In the field of health communication, it has been used, for instance, in preventing damaging alcohol consumption among adolescents and young adults [8].

In the first step, determination of campaign input, the fundamental problem is defined and how the problem relates to the parties affected, clients, campaign principals, and other stakeholders is analyzed [4]. In the problem analysis step, its causes, aspects, and effects are established [4]. In order to define the target group, the groups of people to be addressed are precisely described and examined in detail [4]. Here, an examination of values and attitudes is relevant to understand the motives of the target group and gauge their reaction to messages [6]. In addition, the strengths of the target group should be analyzed to enable selection of strategies suitable to achieve behavioral change [9]. Building on this, the campaign goals [4] are formulated on various levels. On the cognitive level goals are set to create awareness of the problem and convey information, on the affective level to sensitize and encourage acceptance and motivation towards recommended types of action and on the behavioral level to achieve specific behavioral patterns [4]. Working on several goal levels is particularly advantageous if the target group's interest in the topic is low [4, 6]. Selection of the strategies determines how the campaign goals are to be achieved. Here too, various methods should be combined and the preconditions of the target group should be taken into account. In the case of low-education target groups, affective and social strategies which appeal to the emotional level are often more effective than cognitive ones [4]. Next, the results of the previous process steps in the campaign strategy are recorded and the campaign output is planned with messages and communication channels.

The campaign effects are derived from implementation of these [4]. Throughout the process all steps and effects are documented and evaluated [4, 9].

Research question

Following on from the results from part 1 of the article [2], the campaign model by Bonfadelli and Friemel [4] is to be used as an example in a case study to develop approaches for communication campaigns to promote a plant-based diet among the target group of adolescents and young adults, particularly those with low educational status. Firstly, action recommendations should be identified to communicate the PHD effectively to this target group, and secondly it should be discussed to what extent use of this model in nutrition communications is practical and advantageous.

Methodology

Based on the results of the target group survey already conducted (part 1) [2] and literature, the steps of the process model [4] were followed through as an example. This enabled only a basic establishment of the campaign input, since this depends to a large extent on the design conditions of an actual campaign. Analysis of the problem and definition of the target group were done on the basis of structured literature research and the subsequent target group survey.

Then, in the fourth and fifth step of the model, the campaign goals were defined and sample strategies selected: firstly, a higher campaign goal was formulated and broken down into subgoals. On the basis of the need for change within the target group established in the course of the survey, specific behavioral patterns were defined as conative subgoals. Taking account of the identified attitudes and motives of the target group, their expectations of self-efficacy, outcome expectations, and the social norms of their environment, additional cognitive and affective subgoals were established. In order to develop action recommendations for selection of the strategies, the results of the survey and literature research were incorporated.

Since "determination of campaign output" depends on the specific design of an actual campaign from which the campaign effect is derived in the next process step, these two steps

of the model were not considered in this sample consideration of the research question. Finally, recommendations from the literature were applied to the present case in order to identify suggested action for the evaluation.

Results

Campaign input

As the target group affected by the problem, young people, particularly those with a low-educational status, are part of the campaign input. Responsibility for the campaign could be assumed by, e.g. public institutions such as the Federal Centre for Nutrition (*Bundeszentrum für Ernährung*, BZfE), health insurers, or foundations. Those which should be considered stakeholders are players

with an interest in healthy and/or environmentally-friendly behavior among the target group, e.g. (vocational) schools, employers, healthcare representatives and environmental or climate protection bodies.

Problem analysis

The need for intervention demonstrated by the results of the conducted survey (part 1) [2] is for an increase in consumption of wholegrain products and a considerable increase in regular consumption of vegetables, pulses, and fruit and in particular pulses as an alternative to meat. This problem situation is linked to relatively low expectations of self-efficacy and the obstacles to implementation of the

| Campaign goal | | |
|---|---|---|
| The eating habits of the target group should be changed to a more sustainable, plant-based diet. | | |
| Conative goals | Cognitive goals | Affective goals |
| <ul style="list-style-type: none"> • At least 5 portions of vegetables, pulses, and fruit should be consumed per day. • Pulses should be consumed as a meat substitute at least twice a week. • Max. 600 g of meat should be consumed per week. • Consumption of wholegrain cereals should be increased to at least 1 or 2 portions per day. • Communication to the target group on the topic of sustainable nutrition should be increased. | <ul style="list-style-type: none"> • Knowledge of the effects of animal and plant-based diets should be expanded. • Awareness of the broad variety and preparation options of plant-based foods should be expanded. • Competence in identifying trustworthy sources of nutritional information should be improved. | <ul style="list-style-type: none"> • The dichotomous view of plant versus animal-based diets should be abolished. • The attitude that environmental problems can be solved and plant-based nutrition is an effective measure should be promoted. • Motivation to take responsibility for the environment and food security should be increased. • Acceptance of plant-based nutrition should be improved within the peer group. |
| Campaign strategies | | |
| <ul style="list-style-type: none"> • Affective strategies: target group will be addressed on an emotional level. • Social strategies: target group-specific role models will be used as behavioral models. • Realistic and understandable messages will be formulated. • The relevant motives and result expectations of the target group (biodiversity, animal welfare, food security, health) will be addressed. • The links between the motives considered less relevant by the target group (e.g. climate, water consumption) and a plant-based diet will be explained in an understandable and appealing way. • The idea that a plant-based diet does not mean giving up animal products will be conveyed. • The target behavior will be linked to values relevant to the target group. | | |

Fig. 2: Action recommendations for campaign conception – campaign goals and strategies

stated behavioral changes perceived by the target group, which are mutually dependent. The social norms within the peer group, which were evaluated by the target group as rather negative, also make the situation more difficult – especially as support from their social circle was mentioned most frequently by the respondents in the question as to possible helpful resources for behavioral change. The personally relevant motives for a change of eating habits rated most highly by the young people were their own health, preservation of biodiversity, and reducing hunger in other regions of the world. However, behavioral changes seem to be relatively rare. A contributory factor here is the lower outcome expectations that a plant-based diet brings real improvement – also with regard to problems such as climate change and water consumption. In addition to this, there is the frequent assumption by respondents that a plant-based diet is equivalent to strict elimination of meat, which can make communication more difficult.

Definition of the target group

Adolescents and young adults from low educational backgrounds were initially selected as the target group due to their dietary patterns, which, as studies on eating habits have shown, differ comparatively strongly from a plant-based diet along the lines of the PHD [1]. The subsequent target group survey addressed young people with a variety of educational qualifications and indicated a need for action regardless of educational status. Therefore, target group-specific communication measures should be designed which address young people in general, and also specifically the educationally disadvantaged among them.

Definition of goals

Based on analysis of the target group, a campaign goal and related subgoals were formulated (♦ Figure 2). In this process, the target behavior defined before the survey was used as a basis and adapted to the target group using the results of the survey (part 1) [2].

Strategy selection

In order to select campaign strategies suitable for the target group, action recommendations were established (♦ Figure 2).

Evaluation

In order to be able to evaluate achievement of goals, besides the documentation of all processes, [4] it would be advisable to conduct a longitudinal study to show the developments in the attitudes and eating habits of the target group [8].

Discussion

For the sample planning of campaign approaches within the framework of this case study, the model of communication campaigns [4] proved suitable – particularly due to the process-led problem and target group analysis, which creates a valuable basis for designing campaigns which are well-founded, systematically prepared, and effective for the target group.

The combination of a theoretical (systematic literature research) and empirical background (survey) allowed identification of the

factors causing the problem and an examination of the interests of the target group from various perspectives. This enabled clear determination of the starting point for problem solving and rigorous identification of campaign goals. The target group was initially selected on the basis of the literature research and expanded as a result of the survey, since this identified a need for change across all educational backgrounds. This adaptation is a feature of the campaign model in which process steps two to five do not necessarily have to be carried out consecutively, but are instead implemented dynamically.

Campaign goals

Since, according to the survey results, the target group is at different levels of behavioral change with regard to the goal behavior, the next desired behavioral step varies individually. Therefore, every behavioral change towards the PHD is to be seen as a positive development. How these changes look and can be achieved is set out in detail in the subgoals.

Conative goals

Since the majority of the respondents have not yet managed to implement consumption of five portions of vegetables, pulses, and fruit per day or the regular consumption of pulses as an alternative to meat, this represents a relevant goal. Since the consumption of pulses in particular does not seem to be an everyday routine for the target group, the goal was set to a lower level by reducing the target to two meals per week with pulses instead of meat/fish. At the same time, limiting meat intake to a maximum of 600 g per week in line with the PHD and DGE recommendations is desirable [10, 11]. However, it is assumed that this requires less active communication since meat reduction will already occur to a limited extent if the goals mentioned above are achieved. Only half the respondents report consumption of at least one portion of wholegrain products per day. But since the PHD provides for exclusive consumption of wholegrain cereal products [10], it is suggested that all respondents further increase their consumption of wholegrain products.

Similarly, communication within the target group on plant-based, sustainable eating habits should be increased and encouraged in order to raise awareness of the basic problem and encourage a process of reflection [6].



Achievement of these behavioral changes requires, in turn, achievement of the goals on the cognitive and affective levels.

Cognitive goals

The literature research and survey indicate some gaps in nutritional knowledge among the target group. However, an understanding of the links between nutrition, health, the environment, and food security are preconditions for the formation of positive result expectations and action on the basis of related arguments. Therefore, one of the goals should be to convey knowledge on the effects of plant and animal-based nutrition in a comprehensible form. In order to improve the self-efficacy expectation in the target group and address their concerns that a plant-based diet involves more effort and is also boring, the target group's awareness of the variety of plant-based foods available and the possibilities for their preparation – particularly pulses – should be expanded. This should also include an investigation into the extent to which the target group considers the food supply as inadequate, in order to be able to support the use of existing resources. Since sections of the target group get nutritional information primarily from specific, personally favored influencers, food-bloggers, etc. on social media, they should also be enabled to evaluate the trustworthiness of information sources. To achieve this, their basic knowledge of nutrition should be expanded further.

Affective goals

Working on an emotionally-receptive level is an absolute necessity to reach the selected target group, who may be less open to cognitive messages. Elimination of the dichotomous categorization of nutrition into “unlimited meat consumption/no restriction” and “vegetarian/vegan” should also be formulated as an affective goal in order to enable an effective understanding of a plant-based diet along the lines of the PHD, which sits between these two alternatives.

In order to improve expectations of self-efficacy and outcome expectations, the attitude should be encouraged that a sustainable, plant-based diet is an effective measure to protect the environment and enable global food security. At the same time, the attitude that each individual has a joint responsibility for both problems and motivation to personally accept this should be encouraged.

Furthermore, the target group's acceptance of a plant-based diet among their peers should be increased. If this is successful, members of the target group can themselves experience more positive social norms within the peer group, which will benefit the formation of intention. Besides this, the role of the family should be considered and incorporated to provide practical support to the target group in changing their behavior.

Action recommendations for developing campaign strategies

For the selection of strategies, too, various theoretical starting points were chosen. It is to be expected that the target group is difficult to reach using cognitive strategies. So affective and social strategies should be selected primarily and the group should be addressed on an emotional level to enable understandable communication of content [4]. Strategies that use target-group-specific role models as messengers and behavioral

models could encourage model learning and influence social norms [6].

The messages formulated should be short, understandable and realistic [4, 6, 12] and relate to topics with the strongest result expectations and the most relevant reasons for change – biodiversity and animal welfare, food security and personal health – in order to convince the target group of the relevance of sustainable nutrition. The topics of water consumption and climate appear to evoke less powerful outcome expectations and motivation. In these cases, the links to nutrition are complex and presumably less tangible and are therefore probably categorized as less relevant by the target group. These topics must therefore be presented in more understandable ways without losing their content accuracy through extensive simplification [12].

It should also be communicated that a plant-based diet is not a categorical exclusion but rather a different prioritization of food groups and the symbolism of the foods should be considered. The creation of positive associations with a plant-based diet, by linking it to values of the target group like well-being, fun, adventure, and discovery of something new [5, 7], is desirable. As confirmed by the obstacles and resources mentioned by the respondents, the facilitation of plant-based nutrition also requires measures aimed at the social context. Moreover, consideration should be given to how resources could be created and obstacles removed to enable the target group to derive benefit in their own lives.

Limitations

In order to obtain a comprehensive and accurate assessment of the need for change and the requirements of the target group, it would have been useful to have used a larger sample and more up-to-date literature data on eating habits. By conducting a survey of the target group, participation was partially practiced in the development of campaign approaches. For development of a real campaign relevant to the target-group, however, participation should be further expanded.

Conclusion

Communication campaigns promoting behavioral change in young people towards a sustainable, plant-based diet along the lines of the PHD should appeal to the target group

using realistic messages on an emotional level and address their motives and interests. Specifically, young people can probably be reached with arguments relating to animal welfare, biodiversity, and food security. At the same time, the expectation of self-efficacy within the target group and outcome expectations that a plant-based diet has positive effects must be promoted so that these arguments can initiate behavioral changes.

In this case study the model of communication campaigns by Bonfadelli and Friemel [4] proved a well-founded, target-oriented and advantageous method for developing campaign approaches and should be further tested for the planning of nutritional communication campaigns.

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Conflict of Interest

The authors declare no conflict of interest.

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