



Evaluation results of the project “Die Küchenpartie mit peb”

Strengthening food literacy and promoting social participation through intergenerational cooking activities

Franziska Lehmann, Stefan Schmidt, Melanie Braun, Lena Köhler, Lisa Tonk, Eva Breitbach

Introduction and research question

Food literacy is defined as the ability to translate theoretical knowledge and practical skills into appropriate action in everyday nutrition. It is about knowledge, skills and behaviors to be able to plan, organize, select and prepare food [1].

In addition, it is about connections in everyday eating and drinking, where enjoyment is considered in addition to health-promoting food choices [2].

Current data show that younger people have lower nutritional literacy than older people [3]. Accordingly, older generations could pass on their knowledge to younger generations. In particular, as family members are now less likely to live together in the same house or place [4] and many older people live alone [5], the exchange of knowledge between the generations is a possible starting point for measures to strengthen food literacy.

With the aim of strengthening food literacy and, in particular, knowledge about food and its preparation, and promoting social participation, the IN FORM project “Die Küchenpartie mit peb” (“The Kitchen Party with peb”) brought children and adolescents with older people together in the kitchen. In the context of these intergenerational cooking events, cooking and eating together was primarily about positive experiences related to food and drink. During the four-hour action days, food-related knowledge was imparted in a practice-oriented manner by a nutritionist trained in the “Küchenpartie” concept. The main topics include hygiene and occupational safety, the intergenerational exchange of experience and knowledge, general nutritional recommendations and sustainability aspects. The concept was tested over four consecutive days at 16 locations during the summer and fall school vacations of 2021, each with a

Abstract

The IN FORM project “Die Küchenpartie mit peb” brought together children and adolescents with older people for intergenerational cooking activities, in order to strengthen the food literacy of both age groups and to promote social participation, especially among the older generation. To evaluate and reflect on the contribution to health promotion, the two-year project was evaluated externally. For the evaluation, a mix of quantitative and qualitative methods was used. The results show that the majority of participants increased their knowledge about food and its safe preparation. 93% of the children and adolescents and 98% of the older people thought it was good to form a cooking team with people of the other generation. Overall, the satisfaction with the cooking activities was very high (school grade 1.2). These results provide evidence that hands-on food education initiatives with an intergenerational approach could make a valuable contribution to health promotion.

Keywords: food literacy, nutrition education, cooking, generations, evaluation

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fixed group of six to twelve participants. The cooking events took place in kitchens of multigenerational centers, community college or family education centers, etc., and were carried out in close consultation with local organizations. The concept is described in more detail elsewhere [6].

In order to be able to assess the contribution to health promotion, “Die Küchenpartie mit peb” was evaluated externally. The evaluation identified to what extent the goals of the project were achieved by the participants and derived measures for further development and stabilization of the cooking activities.

Method

Evaluation

The evaluation was conducted from November 2020 to March 2022 by the agency “schmidt evaluation”. This agency has already been responsible for the program evaluation of the IN FORM National Action Plan and for more than 20 other IN FORM project evaluations. A mix of quantitative and qualitative methods was used. The results presented here were collected from June to December 2021, as the cooking activities investigated were carried out from June to October and subsequently discussed with the nutritionists.

Quantitative method

An anonymous written survey of the participants was conducted at all 16 locations. The written survey primarily investigated the level of satisfaction of the participants with the cooking activities. In addition, self-assessment questions were included in the questionnaire in order to obtain information on the extent to which nutritional and food skills and social participation were improved. The questionnaires were distributed to the participants by the nutritionists at the end of the cooking activities. Both questionnaires contained 19 closed questions and two (children/adolescents) or four (older people) supplementary open-ended questions. 15 of the 19 closed questions were asked to both age groups in the same wording for better comparability. Of these 15 identical six each related to the increase in knowledge about food and its processing, as well as to the impulses received for nutritional behavior. Three of the identical questions dealt with social participation. The other closed questions referred to age-group-specific goals, e.g., the transfer of experiences from the older people to the children/adolescents. Completed questionnaires were sent to the evaluation team and analyzed descriptively using SPSS software.

Qualitative method

The evaluation team carried out participant observations on the third day of four selected cooking events. The inclusion of all 16 cooking events was not possible within the available evaluation budget. In addition, an approximately one-hour guided group interview was conducted at the end of the day, in which participants from both generations took part. In addition to the written survey, the observation and the group interview were used to investigate the achievement of the objectives and to identify the framework conditions that promoted or hindered the imple-

mentation of the cooking activities. The group interviews were recorded, anonymously transcribed and evaluated according to Mayring [7]. The evaluation was software-supported by MaxQDA. Furthermore, a two-hour guideline-based focus group was conducted online with the nutritionists of the cooking events and evaluated methodically analogous to the group interviews. The focus group was particularly interested in the optimization of the conceptual approach and the adaptation needs for the continuation of the project.

Sample

The sample of the written survey consisted of the participants of the 16 cooking activities. Out of 150 people, 142 (81 children/youth, 61 older people) completed the questionnaires. The children and adolescents who actually participated were between seven and 15 years old and 69% female. The elders were between 54 and 91 years old and 85% were female. During the participant observations of the cooking activities, a total of 19 younger and 15 older individuals participated and approximated the ratio of the written survey sample in terms of age range and gender ratio. Twelve nutritionists participated in the focus group discussion. All have several years of professional experience, have cooked with groups before, and were trained in the “Küchenpartie” concept by the project team in preparation. The social and socioeconomic backgrounds of the participants were not recorded for reasons of data protection and to ensure low-threshold access. Participants were able to participate in the activities without bureaucratic effort and the disclosure of sensitive personal data.

Results

Satisfaction

The children and adolescents both rated “Die Küchenpartie mit peb” and the group leadership on average with a school grade of 1.2. The older participants graded the project with an average of 1.2 and the group leadership with 1.1.

In the answers to the open questions about what was successful and suggestions for improvement, the cooking in multigenerational teams, the good preparation and instruction by the nutritionists, and the recipes or the taste of the food were praised first and foremost.

Food and nutrition literacy

More than half of the children and adolescents and more than a quarter of the older people said they had learned about new foods through the cooking activities. About a quarter of the respondents answered “partly/partly” (♦ Figure 1). Observations and comments from the group interviews showed that some children learned about new foods during the cooking activities (e.g., lentil noodles, lentil paste, cilantro). Some participants from the older generation also learned about new foods or how to handle them (e.g. tofu, avocado, chickpeas). Participants from both age groups learned about dishes that were previously unknown to them.

In terms of ideas gained about cooking, agreement is high at 80% among older people and 91% among children and adolescents (♦ Figure 1). Some of the older participants reported in the group interviews that the recipes were often generally known, but not in the nutritionally optimized form offered, for example by using whole grain products and other types of vegetables. A high proportion of children and adolescents (84%) agreed with the expanded knowledge about possible risks of injury during cooking. Among the older ones, a good two-thirds said they had learned something new in this regard (♦ Figure 1). During participant observation, it was noticeable that the older persons frequently guided the children and adolescents in cutting ingredients and gave cooking advice, e.g. on how to peel or grate vegetables.

According to the questionnaire survey, information on the seasonality of recipe ingredients was provided to participants of both generations (81% older, 54% children/youth). There is little or no difference between the two age groups on the questions of what can be prepared with the foods used and what quantities of them are healthy. The agreement about the awareness of these two aspects is at least three quarters in each case and the partly/partly answers are about one fifth (♦ Figure 1). The nutritionists' perceptions of the learning effects of the participants coincide with the results of the written survey. From their perspective, many children and adolescents also tasted foods even though they had previously signaled an aversion to them. To the older ones, the nutritionists gave tips and informed about widespread misconceptions (“I liked that a lot of advice came or tips. For example, I didn't know whether to peel cucumbers or not. The nutritionist knew exactly why you do it that way, or in which case you do it that way or differently. [...] But then she

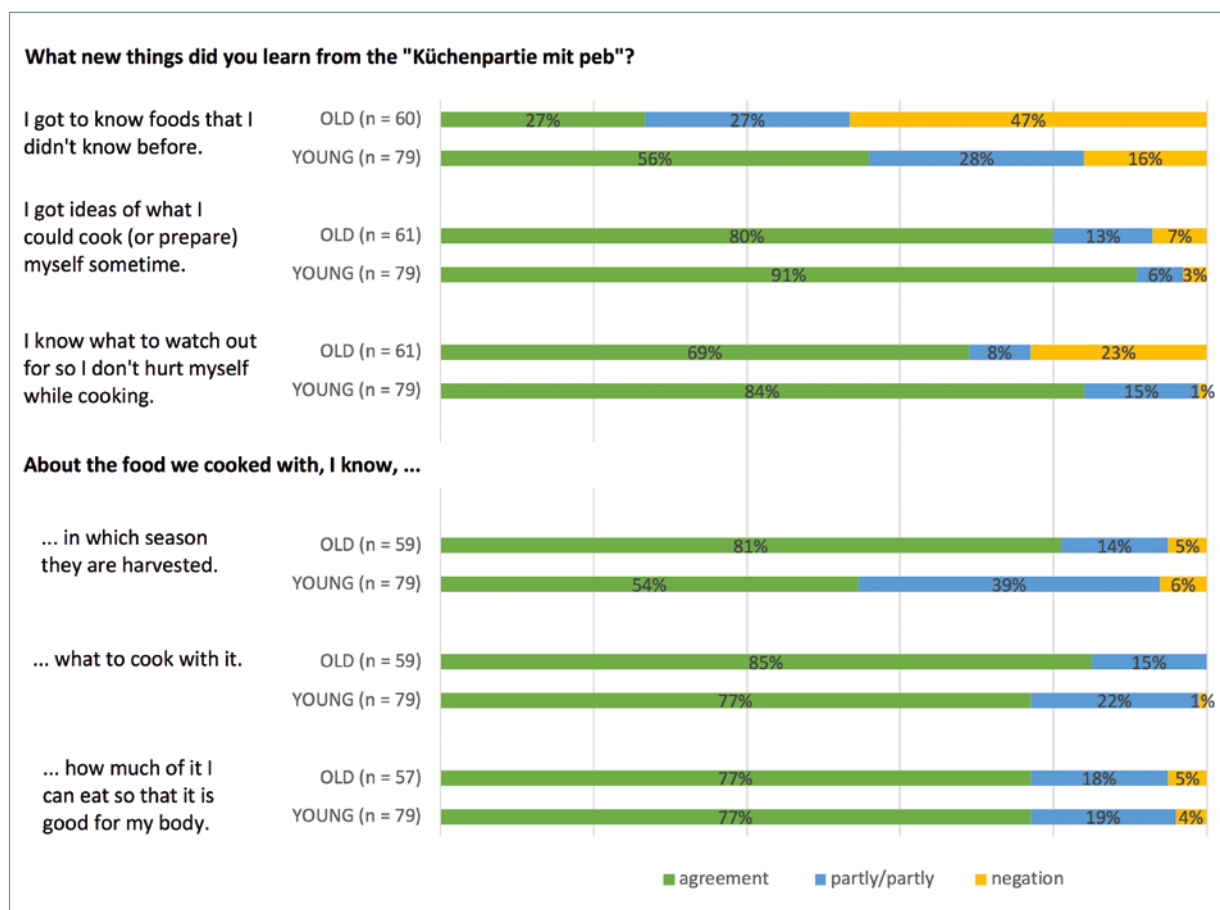


Fig. 1: Results on food knowledge and nutrition literacy



also says the reason. That is important for me", senior) [*„Es hat mir gefallen, dass viele Ratschläge kamen oder auch Tipps. Ich wusste z. B. nicht, ob man Gurken schält oder nicht. Die Ernährungsfachkraft wusste genau, warum man das so macht, oder in welchem Fall man das so oder anders macht. [...] Sie sagt dann aber auch den Grund. Das ist für mich wichtig“*].

About 60% of participants agreed to have thought in the past few days about how often they eat certain foods. Half reflected on how the foods they often eat are produced. 60% of older people and 79% of children and adolescents agreed to have thought in recent days about how they manage to throw away less food in the future (♦ Figure 2). When looking at future eating habits, 86% of older people and 75% of younger people said they want to eat lots of fresh food. About three-quarters of younger people also say they will take more time to enjoy food and three-quarters of older people want to eat their meals at regular times of the day (♦ Figure 2). Based on their experiences, the nutritionists agreed that both age groups were able to take many impulses from the cooking activities into their daily lives.

Social interaction

The atmosphere in the cooking activities was found to be very pleasant by almost all participants (children/youth: 91% and older people: 95%). 93% of the children and adolescents and 98% of the older people welcomed the participation of the other generation

in their cooking team. The vast majority also expressed satisfaction with the distribution of tasks in the cooking groups (85% children/youth, 95% older people). In the qualitative interviews, it became clear that many children and adolescents were interested in the older generation's stories about their childhood experiences ("We did a young-older question and answer session and I thought it was great to find out how the older generation cooked when they were our age", child) [*„Wir haben so eine Jung-Alt-Fragerunde gemacht und da fand ich es toll zu erfahren, wie die Älteren damals, als sie so alt waren wie wir, gekocht haben“*]. A difference in food appreciation was also perceived by the younger ones ("It's also a bit strange, because they (senior citizens) used to steal food from their own cellar, from the pantry. And it's not like that with us, because we can just open a can and eat peaches if we want to. For them it was just something special to eat", child) [*„Es ist auch ein bisschen komisch, weil die (SeniorInnen) haben früher manchmal vom eigenen Keller, von der Speisekammer das Essen geklaut. Und bei uns ist das halt nicht so, weil wir einfach, wenn*

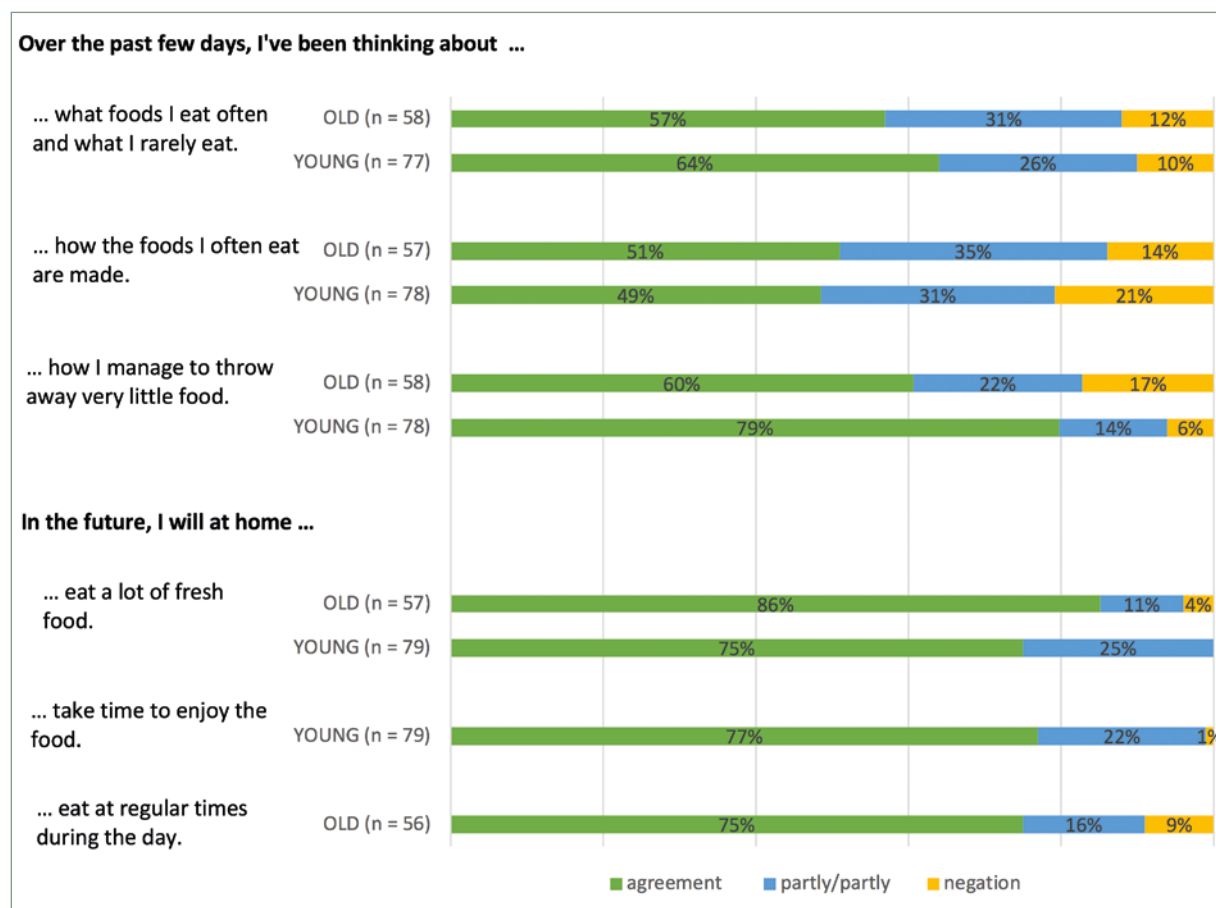


Fig. 2: Results on the reflection of the eating behavior and on the impulses for it



wir wollen, eine Dose aufmachen und Pflirsche essen dürfen. Bei denen war das halt etwas Besonderes das zu essen“].

The older participants were impressed by the younger generation's motivation for cooking. They also emphasized that the majority of the young participants' self-confident demeanor surprised them. There was a mutual interest in the attitudes and experiences of the other generation (“So the experience that you can work so harmoniously with the young people in the kitchen, that was totally new and nice”, senior) [„Also die Erfahrung, dass man mit den Jungen so harmonisch in der Küche da hantieren kann, das war jetzt total neu und schön“], (“I also thought it was cool that the younger and older generation did something together. Otherwise it tends to be said that the older ones complain about the young ones and the young ones complain about the older ones”, child) [„Ich fand es auch cool, dass die jüngere und ältere Generation etwas zusammen gemacht hat. Sonst heißt es eher, die Älteren beschwerten sich über die Jungen und die Jungen beschwerten sich über die Älteren“]. In many cases, there were group and individual discussions between the generations, and at the end of the cooking activities, there was an exchange of contacts between individual young and older participants.

Success factors and inhibitors

The conceptual basis and materials developed by the project team and the effective training of nutritionists were identified as success factors. The materials were judged to be mature. For example, the recipes are suitable both for the cooking activities and for subsequent transfer to everyday life. For the participants, advance information on the intergenerational approach of the cooking activity proved to be just as important as their participatory involvement, for example, in the selection of recipes. In addition, an equal number of young and old in the group composition proved to be effective. For the encounter at eye level, it was important that the nutritionists took away the feeling from the older participants that they were responsible for safety, cleanliness and hygiene (“For me, it was a relief to realize “I am a participant” and we are equal. From then on, I was more relaxed. The first time I was a bit tense because I thought I had to do something, like lecturing or something...”, senior) [„Ich habe für mich erleichternd wahrgenommen “ich bin Teilnehmerin” und wir sind gleichberechtigt. Von da an war ich relaxter. Beim ersten Mal war ich deswegen ein bisschen angespannt, weil ich dachte, ich muss irgendwas machen, so belehrend oder so...“]. In some cases, care had to be taken to ensure that older participants did not feel overwhelmed by the lively interaction with the children and adolescents. Based on the experience reports of the nutritionists and the observations of the evaluation team, it became apparent that visualized mini-inputs, games and interactive methods, room changes and outdoor activities tended to prove successful in imparting knowledge (“I like to visualize and worked with flip charts. Especially the seniors took it very well. Really just single points, otherwise the kids wouldn't have listened at all”, nutritionist) [„Ich visualisiere gerne und habe mit Flip Chart gearbeitet. Vor allem die SeniorInnen haben das sehr gut aufgenommen. Wirklich nur Einzelpunkte, sonst hätten die Kinder gar nicht mehr zugehört“], (“We had the opportunity to go outside. That was really good, e.g. to do the game with the food pyramid outside, worked really well”, nutritionist) [„Wir hatten die Möglichkeit nach draußen zu gehen. Das war wirklich gut, z. B. das Spiel mit der

Ernährungspyramide draußen durchzuführen, hat echt gut funktioniert“]. Kitchens with several cooking islands and good equipment offered more suitable conditions for the cooking activities. The participation of people with age-related health restrictions was generally unproblematic if this was known in advance.

Discussion

As the results presented show, the cooking activities had positive effects on many participants from both age groups. They expanded their knowledge about food and its safe preparation. In terms of reflecting on one's own eating behavior, the project achieved its goals for the clear majority in both generations, e.g. in terms of a balanced and sustainable diet and taking away suggestions for one's own everyday diet. Due to the high relevance to everyday life, the teaching of practical, nutrition-related skills, the integration of the participants' experiential knowledge and the encouragement to reflect on one's own eating behavior from a health and ecological point of view, “Die Küchenpartie mit peb” does justice to the approach of modern and resource-strengthening nutrition education in many respects.

Other practical nutrition education projects in Germany are mostly aimed at children and adolescents, focus primarily on strengthening nutrition skills and operate in the school setting, for example. Examples of nationwide measures that have also evaluated the impact on students are the teaching concept “Ernährungsführerschein” from the Federal Center for Nutrition (BZfE) and the initiative “Ich kann kochen” from the Sarah Wiener Foundation and BARMER. Here, evaluation results show positive effects on the enjoyment and motivation of preparing food, trying out new recipes, and increasing knowledge and skills, e.g., in recipe reading, work processes, cutting techniques, or food preparation [8, 9]. International data on the impact of food literacy interventions with hands-on components also suggest positive effects among secondary school students and adults [10, 11]. The results presented are thus supported, although their comparability is limited due to methodological differences in the surveys.

Investigated effects of extra-familial generation projects are described with a better attitude towards the other generation, whereby stereotypes become relative and mutual ac-



ceptance develops. In addition, an increase in life satisfaction is described for older persons and an increase in well-being for younger participants [12]. In the “Küchenpartie mit peb”, similar effects could be described with regard to attitudes towards the other generation and well-being within the cooking activity. The vast majority participated enthusiastically and contributed to the mixed-generation groups. Individual participants reflected on their age images during the final feedback rounds.

The project “Die Küchenpartie mit peb” is characterized by the linking of the two aspects of strengthening food literacy and promoting social participation. The added value of this connection lies in the exchange of knowledge about the intergenerational approach, which can contribute to strengthening nutritional competence. In addition to the exchange of skills through cooking together in mixed-generational teams, the older generation's stories about their own childhood experiences create access for the younger generation to topics such as sustainable nutrition or food appreciation. The knowledge of the older generation can thus be used as a resource to promote the comparatively lower nutritional competence of the younger generation. At the same time, the experience of cooking together provides an opportunity for building intergenerational relationships. The associated contribution to social integration represents a significant success factor of successful prevention and health promotion measures, in this case in the field of nutrition education [13].

With regard to the resilience of the evaluation results, it can be stated that the methods used are suitable for collecting a self-assessment of the participants on the perceived effects and for collecting constructive suggestions for the modification of the project. Causal cause-effect relationships cannot be established and were not the aim of the survey. Whether and to what extent positive long-term effects are apparent cannot yet be assessed.

Limitations result from the small sample size and the not systematically recorded sample composition with regard to the social and socioeconomic background of the participants. The composition of the participants, based on observations by the evaluation team and the nutrition experts, sketches the picture that mainly single senior citizens registered, almost all of whom were retired and who, according to some accounts, were economically sufficient but rather modestly provided for. The family and economic backgrounds of the children were heterogeneous. Apparently, children and adolescents from immigrant families were also present in almost all cooking groups, but they were underrepresented as a proportion of the total population.

Many participants reported that they had taken part because they enjoyed cooking and were interested in it. For this reason, the project appealed primarily to those who were already interested. Due to the small size of the sample and the small number of male elderly participants, no gender-differentiated evaluations were made. Since the offer has predominantly appealed to women among the elderly, targeted measures should be taken in future in the advertising of the cooking events to appeal more strongly to male interested parties, as they have a greater need for measures to strengthen nutritional competence, as this is lower among

them compared to women [14]. In addition, the concept was tested under special conditions. The measures that had to be taken in the context of the Corona pandemic presented additional challenges for the local cooperation partners, the nutritionists and the participants. A hygiene plan was drawn up in line with current local requirements. The wearing of a mask, compliance with the distance rules and the performance of an antigen test were necessary at almost all locations. All those involved were informed of the respective requirements, and in individual cases registrations were withdrawn as a result. Conceptual adjustments were made in the distribution of the four campaign days – successive instead of weekly – and in the design of the eating situation. In many cases, a minimum distance had to be maintained, which had a negative impact on the dining atmosphere. In addition, due to the measures, the number of participants was limited depending on the location and room size. Further limitations lie in a possible distortion of the results due to possible interviewing effects, e.g., answers favorable to the interviewer due to the group situation and presence of the nutritionist and a socially desirable answering behavior, especially with regard to nutrition-related questions. Furthermore, with its duration of only four days, the project is severely limited in its impact. Only an impression of the chances of the conceptual approach could be gained. If the project were to be made permanent, it would therefore be desirable to create long-term, permanent offerings.

Conclusion and outlook

The project “Die Küchenpartie mit peb” links the goals of strengthening food literacy and promoting social participation, both important components of health promotion and prevention, through the approach of intergenerational cooking activities. Measures of practical nutrition education with a focus on intergenerational exchange can additionally contribute to social integration. Thus, the innovative approach of an intergenerational concept in practical nutrition education can be a promising complement to existing initiatives.

The insights gained were used to further develop the concept, methods and materials. These are now available in an updated edition



of the guidelines for conducting intergenerational cooking events as a freely available document on the website → www.diekuechenpartie.de. A continuation of the cooking activities of the “Die Küchenpartie mit peb” is intended after the end of the current funding phase. The next step could be the permanent transfer into existing, communal structures. In order to provide indications for the further development of the project with regard to its municipal anchoring, the evaluators conducted 13 interviews in February 2022 with municipal actors with whom the “Küchenpartie” team had cooperated during the course of the project.

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The *Plattform Ernährung und Bewegung* (peb) is an association of politics, business, science, sports, parents and doctors. Its members actively promote a balanced diet and more physical activity as essential components of a health-promoting lifestyle among children and adolescents.

IN FORM is Germany's initiative for healthy nutrition and more exercise. It was initiated in 2008 by the German Federal Ministry of Food and Agriculture (BMEL) and the German Federal Ministry of Health (*Bundesministerium für Gesundheit*, BMG) and has since been active throughout Germany with project partners in all areas of life. The aim is to permanently improve people's dietary and physical activity behavior. Further information at → www.in-form.de

Conflict of Interest

The authors declare no conflict of interest.

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