

CHALLENGES AND REFLECTIONS ON THE IMPLEMENTATION OF A FOOD AND NUTRITION EDUCATION PROGRAM (FNE) FOR INDIVIDUALS WITH EXCESS WEIGHT

Desafios e reflexões na implantação de um programa de educação alimentar e nutricional (EAN) em indivíduos com excesso de peso

Desafíos y reflexiones de la implantación de un programa de educación alimentaria y nutricional (EAN) para individuos con exceso de peso

Description or evaluation of experiences, methods, techniques, procedures and instruments

ABSTRACT

Objective: To report the experience of Food and Nutrition Education (FNE) activities developed with overweight and obesity patients. **Data overview:** Food and nutrition education sessions were developed with class I and II overweight and obesity patients in the outpatient center of the *Hospital Universitário/Universidade Federal de Juiz de Fora – HU/UFJF* (University Hospital of the Federal University of Juiz de Fora) who participated in the extension project “*Saúde na Balança*” (Weighing Health). Sessions were carried out in groups and took place weekly in the 1st month, fortnightly in the 2nd and 3rd months, and monthly up to the 6th month, in the period from September 2012 to September 2013. During one year of activities, four groups were developed with a total of 46 volunteers who agreed to participate in the sessions. Nutrition issues that supported individual care were discussed in these sessions. The team identified that place, time, frequency of sessions, availability of time and lack of financial resources were factors affecting patient’s adherence to treatment; thus, some of them were modified and a better adherence could already be verified in the last group. However, 17 dropouts were still recorded. According to patients’ self-reports, it was possible to see positives changes in eating habits and in the way to deal with obesity and associated comorbidities. **Conclusion:** In the course of activities, a bond between the team and the participants was established, allowing the identification of demands and effective ways of working with groups, proving that FNE helps the individual approach as it allows experiences and information exchange, expanding the power of choices for healthy life habits.

Descriptors: Food and Nutrition Education; Obesity; Weight Loss.

RESUMO

Objetivo: Relatar a experiência das atividades de educação alimentar e nutricional (EAN) desenvolvidas em pacientes com sobrepeso e obesidade. **Síntese de dados:** Realizaram-se sessões de educação alimentar e nutricional (EAN) com pacientes com sobrepeso e obesidade graus I e II atendidos no ambulatório do Hospital Universitário da Universidade Federal de Juiz de Fora (HU/UFJF), integrantes do projeto de extensão “*Saúde na Balança*”. As sessões ocorreram em grupo, semanalmente no 1^o mês, quinzenalmente no 2^o e 3^o mês e mensalmente até o 6^o mês, no período de setembro de 2012 a setembro de 2013. Durante um ano de atividades, foram realizados 4 grupos, com um total de 46 integrantes, que aceitaram participar das sessões. Nestas, foram abordados temas em nutrição que apoiavam o atendimento individual. A equipe identificou que local, horário, periodicidade das sessões, disponibilidade de tempo e falta de recursos financeiros eram

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fatores que influenciavam a adesão do paciente ao tratamento, sendo alguns deles modificados, já se observando melhora da adesão no último grupo. Entretanto, ainda foram registradas 17 desistências. Com o autorrelato dos pacientes, foi possível perceber mudanças positivas nos hábitos alimentares e na forma de se relacionar com a obesidade e as comorbidades associadas.

Conclusão: No decorrer das atividades, criou-se vínculo entre equipe e participantes, permitindo identificação de demandas e de formas efetivas de atuação nos grupos, demonstrando que a EAN auxilia a abordagem individual, na medida em que permite troca de experiências e informações, ampliando o poder de escolha por hábitos de vida saudáveis.

Descritores: Educação Alimentar e Nutricional; Obesidade; Perda de Peso.

RESUMEN

Objetivo: Relatar la experiencia de las actividades de educación alimentaria y nutricional (EAN) desarrolladas con pacientes con sobrepeso y obesidad. **Síntesis de los datos:** Se realizaron sesiones de educación alimentaria y nutricional (EAN) con pacientes con sobrepeso y obesidad de grados I y II asistidos en el ambulatorio del Hospital Universitario de la Universidad Federal de Juiz de Fora (HU/UFJF), integrantes del proyecto de extensión “Salud en la Báscula”. Las sesiones se dieron en grupo cada semana en el primer mes, cada quince días en el segundo y tercer mes y cada mes hasta el sexto mes en el periodo entre septiembre de 2012 y septiembre de 2013. Durante un año de actividades fueron realizados 4 grupos con 46 integrantes que aceptaron participar de las sesiones. En ellas se habló de temas de nutrición que apoyaban la atención individual. El equipo identificó que el local, el horario, la periodicidad de las sesiones, la disponibilidad de tiempo y la falta de recursos financieros fueron los factores que influyeron en la adhesión del paciente al tratamiento, algunos de ellos modificables, observándose un cambio en la adhesión en el último grupo. Sin embargo, aún se registró 17 bajas. A través del auto relato de los pacientes fue posible percibir cambios positivos de los hábitos alimentarios y de la forma de relacionarse con la obesidad y las comorbidades asociadas. **Conclusión:** En el curso de las actividades se consiguió el vínculo entre el equipo y los participantes lo que permitió la identificación de demandas y de formas efectivas de la actuación en los grupos demostrando que la EAN ayuda en el abordaje individual al paso que permite el cambio de experiencias y informaciones ampliando el poder de elección de hábitos de vida saludables.

Descriptorios: Educación Alimentaria y Nutricional; Obesidad; Pérdida de Peso.

INTRODUCTION

In recent years, Brazil, like other least developed countries, has been through major economic, social and

demographic changes that determined changes in dietary patterns and physical activity, negatively influencing the health/disease process^(1,2). These changes determine the current situation, marked by a nutritional transition process and characterized by an inversion in the dietary pattern, with increased consumption of foods high in calorie density⁽³⁾.

Poor eating habits and sedentary lifestyle are associated with several health problems, including obesity⁽⁴⁾, defined as a chronic disease in which there is an excessive accumulation of body fat. Obesity is a risk factor for several chronic noncommunicable diseases (NCDs) such as cancer, diabetes mellitus (DM), hypertension and dyslipidemia⁽⁵⁻⁷⁾.

In recent decades, there has been a rapid increase in the incidence of obesity and its comorbidities worldwide. In Brazil, according to the *Pesquisa de Orçamento Familiar* (Consumer Expenditure Survey) (2008-2009), 49% of the adult population had excess weight, and 14.8% was obese⁽⁸⁾. It is estimated that 35% of Brazilian adults may become obese in 2025, a fact that will have important consequences for public health⁽⁹⁾.

This panorama of nutrition and health points to the urgent need of developing health promotion actions as well as actions of incentive and rescue of healthier eating habits, especially among overweight and obese individuals, for they are more susceptible to developing other NCDs⁽⁶⁾. In this sense, the FNE is an important tool to be adopted in clinical practice to assist in the mitigation of body weight and the risk factors associated with excess weight, adherence to the treatment of obesity, and lifestyle change, with positive long-term repercussions⁽¹⁰⁻¹²⁾. The FNE, which is included in health education, is defined as an essentially active process that involves changes in thinking, feeling and acting of individuals, and by which they acquire, change or reinforce attitudes and practices that lead to health⁽¹³⁾.

The increased prevalence of obesity implies setting public health actions priorities, reserving pride of place for food and nutrition education actions⁽¹⁴⁾. However, although the promotion of healthy eating habits is currently the priority of public health, food and nutrition policies in the country, satisfactory results in the prevention and control of obesity have not been achieved yet. Official documents on the same matter do not offer theoretical framework on educational approaches, nor indicate guidelines for practice. As a result, healthy food promotion actions have been marked by the absence of innovative actions and the reproduction of ineffective strategies, which justifies the need for continuity in different intervention studies⁽¹⁵⁾.

Thus, the aim of this study was to report the experience of Food and Nutrition Education (FNE) activities developed with overweight and obesity patients.

DATA SYNTHESIS

Implementation of the intervention strategy

The outpatient department of clinical Nutrition of the HU/UFJF provides care to individuals referred from health centers of Juiz de Fora, an average of 40 patients in first consultation per month. Of these, about 75% are overweight or have some degree of obesity.

Although nutritional care is provided in a comprehensive and integrated way, nutritionists began to notice a low adherence to treatment and maintenance of weight loss by patients with excess weight. Although it is known about the need for changing dietary habits and practices of the population, there is a dearth of research on the possible factors that interfere in the development of eating behavior⁽¹⁶⁾.

In this sense, given the difficulty patients with excess weight have in adhering to individualized treatment and the need for satisfactory changes, it was deemed important to implement the FNE program titled “*Saúde na Balança*” (Weighing health). This program includes group sessions to discuss issues about food, nutrition and health, in order to support individualized nutritional care, encourage a healthy lifestyle, improve treatment adherence, reduce risk factors for comorbidities associated with obesity and promote quality of life with positive repercussions in the long term.

Target audience and setting

Individuals over 18 years of age, of both sexes, with class I and II obesity and overweight attending the nutrition outpatient center of the HU/UFJF.

Participant recruitment and eligibility criteria

On the day of the individualized care provided in the outpatient center of clinical nutrition of the HU/UFJF, patients were invited to join the *Saúde na Balança* group.

We considered eligible those individuals over 18 years, of both sexes, in the first consultation at the outpatient center, who were overweight (BMI 25-29.9 kg/m²) and class I (BMI 30.0-34.9 kg/m²) and II (BMI 35-39.9 kg/m²) obese. Thus, after the identification of these patients, we carried out anthropometric measurements to calculate BMI in order to identify the ones who met the eligibility criteria. Those who met the criteria were invited to participate and the main characteristics of the group were clarified. Those who agreed to participate signed the Free Informed Consent Form and answered questionnaires containing information on sociodemographics and lifestyle. Ineligible patients were seen by a nutritionist of the outpatient center according to the routine already established.

This project was approved by the Human Research Ethics Committee of the UFJF.

Participant recruitment for the group described in this experience report began in September 2012. The first activity of the “*Saúde na Balança*” began in November of that year. Until September 2013, we recruited 46 participants, divided into four different groups, but only 34 actually began their participation in the groups. Over the meetings, there was a dropout of 17 participants for various reasons such as location, time, frequency of sessions and lack of financial resources; however, the highest number of dropouts was mainly in the first three groups held.

Characterization of patients recruited for participation in the program

Of the 46 patients who agreed to participate in the *Saúde na Balança* group, 91.3% were female, with a mean age of 47±13.62 years, and 46% reported having primary education. As to BMI and comorbidities, it was found that: most (72%) had class I and II obesity; 52% had hypertension; 15% had DM, and 11% had heart diseases. Regarding the recommendations of the healthy eating guide for the Brazilian population, which recommends the maximum consumption of 1 liter/month of oil for 4 people (250ml/per capita) and 150g/month of salt/month⁽¹⁷⁾, it was observed that 90% and 52% of participants in the group had a consumption pattern above the recommended, respectively.

Description of FNE activities

The Nutrition and Physical Education practitioners of the Adult Health Multidisciplinary Residency Program of the HU/UFJF, along with the students and faculty of the Nutrition undergraduate program of the UFJF, led the group activities. The meetings were held in a classroom at the HU/UFJF and lasted 60-90 minutes.

In the first month, there were four weekly sessions. Subsequently, the sessions became fortnightly for two months, and monthly until the sixth month, totaling eleven group sessions over a six-month follow-up.

The topics addressed in the four groups were the same, changing only the way to approach them, according to the identity of the members. In addition, for the latter, although the issues were the same, the activities were carried out in a more dynamic and playful way, which stimulated the learning of the participants and sparked their interest, ensuring better adherence. At the end of the meetings, we assigned a task related to the subject and, as an incentive, they were offered a gift and a primer on the subject addressed.

The topics were addressed through education strategies, using material resources such as replicas and food labels, pictures, board games, competition, crossword, memory games and preparation of healthy recipes in order to always seek the effective participation of attendees. The first session of the FNE program had a diagnosis nature; we carried out a focus group with a guiding issue. This activity aimed to identify which aspects related to food and health were of interest to patients. The contents discussed at the meetings were supported by materials published by the Ministry of Health, such as the “*Guia Alimentar para a População Brasileira*”⁽¹⁷⁾ (Food Guide for the Brazilian Population), “*Dez passos para uma alimentação saudável*”⁽¹⁸⁾ (Ten Steps to Healthy Eating), and “*Caderno de Atenção Básica da Obesidade*”⁽¹⁹⁾ (Obesity in Primary Care Booklet).

Evaluation and limitations of the program

During the implementation of the FNE program, we identified several factors and limitations that may have influenced the effective adherence of the participants to the program. Among them, the difficulty in recruiting patients stands out, as on the day of the nutrition consultation many agreed to participate in the group meetings, but when the meetings started, they reported that they could not participate due to lack of time, other commitments or financial hardship to go to the location of the meetings. In addition, the eligibility criteria were initially defined only for overweight and class I obese patients, hindering a larger recruitment, as there was a large number of patients with class II obesity.

In the beginning of the implementation, there was a low adherence of the participants to group activities, which could be verified by the large number of dropouts during the meetings. Of the 34 patients who actually began their participation in the activities, only 20 participated in more than 70% of the meetings.

Given this low adherence, especially in the first three groups, we carried out an evaluation of the activities via telephone with participants who had given up participating in the sessions in order to identify the main limitations of the program. Thus, it would be possible to intervene in these limitations so that they could be overcome before the start of a new group.

Some of the barriers identified were: I. the place where the group meetings took place, because most patients lived in distant neighborhoods and hence needed to take more than one bus; II. time, because it was close to lunch break; III. frequency of sessions; IV. lack of financial resources, which hindered the purchase and preparation of educational materials for use in the activities; V. the physical structure

of the room where the meetings took place, which, combined with the small number of participants, made it difficult to carry out some educational strategies, making the development of the contents worked in the first FNE groups less playful and monotonous.

After identifying these obstacles, which led to a low adherence among the first FNE groups, we established important changes that were implemented in the group of patients that began in September 2013. Thus, the meetings began to be held at a new location, near downtown; therefore, it was easier to access and had a room with more space and better infrastructure, making it possible to carry out the educational strategies in a more appropriate and playful way. In addition, there was a change in the time of activities, which started to happen in the afternoon, after lunch; the frequency of the sessions became fortnightly, with a total of twelve sessions at the end of six months of FNE; and eligibility criteria started to include class II obesity (BMI 35.0-39.9 kg/m²).

Likewise, we included one more individual consultation to be carried out monthly due to the demand from patients themselves, who reported difficulty in following the guidelines and the meal plan.

Given these changes, which were made in order to overcome the limitations, we carried out an evaluation in the fourth group to check the participants' satisfaction with the proposed program. At the end of each meeting, an evaluation form was handed out so they could give their opinion on the content and educational strategies used as well as suggestions for improving the project. With regard to satisfaction, all participants reported being satisfied with the proposed themes, the treatment provided by the team and the ability of students and practitioners to address the issues. In addition, it was verified a better adherence of this group to the meetings, with changes in lifestyle such as reducing the consumption of processed foods, the amount of salt and oil used in the preparation of food, choosing healthier foods and positive changes in anthropometric measures.

When asked about their self-evaluation after participation in FNE sessions, patients showed positive responses. Some reports are described below.

“I am leaving with an enlightened view, as I saw that healthy foods in small servings can make you lose weight and that we must eat every three hours.” (P1)

“I am aware of the amount of salt and fats that we should consume every day and the importance of reducing or quitting processed food.” (P2)

“I am leaving the group knowing that a healthy diet ensures better health, less weight and measures.” (P3)

Chart I – Description of group sessions. Juiz de Fora, MG, 2012-2013.

ACTIVITY	STRATEGY USED	OBJECTIVE
1. Learning with the servings and caloric values of foods	We presented the types of portion sizes and the meaning of servings through utensils and replicas of foods. Each participant set up the meals with the respective servings according to their meal plan.	To clarify the meaning of servings and portion sizes in order to improve the understanding of the proposed meal plan.
2. Myths and truths about obesity control	We distributed placards with “myth” and “truth” written on them to participants who were gathered in groups. After the questions, the groups raised the placards and doubts were clarified.	To disagree on true and false statements about nutrition, physical activity and weight loss.
3. Getting to know the food pyramid and the food groups	Through an empty food pyramid we described the meaning of the divisions of food groups. Participants filled the pyramid with replicas of foods and then the mistakes were corrected highlighting the functions of the groups and the recommended portions.	To inform about the importance of the recommended portions and functions of each group of the food pyramid to help in the food choice.
4. The reality of processed food	We showed the amount of oil, salt and sugar present in processed foods and the relationship between excess consumption and the onset of NCDs.	To warn about the indiscriminate use of these products and encourage the consumption of natural foods.
5. If you are going to work out, you need to eat!	Using a drawing of a pyramid divided into parts, the members were informed about the frequency for performing several activities. Each person received images of different activities and filled the pyramid according to the information received. After that, they were given options of meals to be eaten before and after the different activities.	To explain about the different types of activities, provide information about the importance of eating before and after the activity and address the importance of hydration.
6. Ten steps to healthy eating	Participants were divide into two groups and each group received five steps to healthy eating. We carried out a competition in which group “A” should guess which step group “B” was describing through mimics and drawings. The group that guessed the greatest number of steps got to win the game.	To inform participants about the most appropriate food choices through tips from the healthy eating guide.
7. Getting to know food labels	Using nutrition facts labels we described the meaning of all mandatory items, the importance of the list of ingredients and the differences between diet, light and zero products. Each member received a food label and, through the analysis of its characteristics, told the others about its nutritional value.	To explain about the importance of properly understanding the food labels in order to help in the food purchase and find out about diet, light and zero products.
8. Functional foods	Using a human drawing on a card we showed the relationship between functional foods and the benefits to several parts of the body. We carried out a cross-word puzzle in which participants filled the blank spaces with the names of foods according to the functional tips given.	To encourage the consumption of foods with functional properties and describe their beneficial actions.
9. Hygienization, conservation and storage of foods	Participants received information on proper food hygiene and storage practices. Finally, they set up a cardboard refrigerator with replicas of food, according to the information provided.	To raise awareness of proper techniques of storage, conservation and hygienization of food.
10. Total utilization of food	We showed the nutritional value of usually discarded parts and the importance of the total utilization of food to avoid waste. A memory game was carried out with figures of peels, stems and seeds of food and the corresponding preparations.	To raise awareness of the importance of not wasting food and provide preparations that can be made from parts that are typically discarded.
11. Practical tips for healthy weight loss	We carried out a board game in which the participant rolled the dice and moved the pieces through the corresponding number of spaces. If stopping on a space with a positive message related to nutrition or weight loss, the player could advance; if stopping on a negative message, the player should return.	To provide tips on nutrition and weight loss to help maintain the goals achieved until the penultimate meeting.
12. Celebration party	Each participant prepared a healthy/functional recipe for the celebration and we held a discussion about the goals of the group.	To share experiences and goals achieved during the six-month group.

The evaluation of the last group showed that the changes made by the team were crucial to ensure better adherence of participants and achieve the goals with FNE activities.

Challenges

During the group activities, we identified issues that need to be re-evaluated and improved.

Participant recruitment is still a challenge. It is necessary to reduce the time between the recruitment and the beginning of the meetings so that participants who agree to join the group on the day of the consultation are not left waiting too long and do not give up to participate.

Through participants' self-reports, it was possible to verify satisfactory changes in behavior and eating habits; however, only this aspect is not enough to evaluate the effectiveness of the program because – despite being a widely used method – it has a significant uncertainty potential⁽²⁰⁾. Thus, it is necessary to carry out new groups so that in the future one can evaluate more deeply the qualitative and quantitative variables, verify the adherence of the participants to the guidelines proposed and evaluate the response to the proposed nutritional intervention in relation to nutritional status, habits, food intake and biochemical profile.

Since the etiology of obesity is multifactorial, resulting from genetic and environmental interaction, mediated by social, economic, endocrine, metabolic and psychiatric factors⁽²¹⁾, there is still the need for greater interdisciplinarity and integration with professionals from other fields of health care to gather knowledge and build a real integrality aiming at quality of life of members of the group and the success in the treatment of obesity.

CONCLUSION

The implementation and development of FNE activities in the “*Saúde na Balança*” group was effective insofar as it strengthened the bond between the team of professionals involved and the participants, allowed the identification of problem demands related to patient recruitment and efficient ways of working in groups, and improved the understanding of nutrition guidelines given in the individual consultations. Thus, this experiment showed that the FNE is an interesting tool to be associated with the individual care because it allows the exchange of experiences and information, expanding the power of choice for healthy lifestyles.

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CONFLICTS OF INTEREST

The authors of this paper have no conflicts of interest to declare.

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