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An assessment of the perception of physical activity, eating habits, self-efficacy and the knowledge about healthy food in Albanian adolescents

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ABSTRACT

Çitozi R, Bozo D, Pano G. An assessment of the perception of physical activity, eating habits, self-efficacy and the knowledge about healthy food in Albanian adolescents. *J. Hum. Sport Exerc.* Vol.8, No. Proc2, pp. S192-S203, 2013. Objective: The present study evaluates eating habits and behaviors, and nutritional and food safety knowledge of a group of Albanian adolescents. Design: A dietary questionnaire previously constructed and tested was self-administered during school time. Each section was evaluated using a separate score. Setting: The study was carried out as a part of a nutritional surveillance project in the capital of Albania, Tirana. Subjects: Three hundred and forty (340) adolescent subjects (180 males, 160 females), aged 15.2 ± 0.5 years, attending the 8-9 years of secondary schools participated in the study. Measures: We evaluated eating habits, physical activity, meaning of healthy and unhealthy dietary habits and food, self-efficacy, barriers affecting healthy food choices, nutritional and food safety, weight, height, Body Mass Index (BMI). Results: Only 33.1% of the samples have satisfactory eating habits; 16.8% have a very active lifestyle; only 7.9% have quite good nutritional knowledge. Conclusions: The results point out unhealthy behaviors influencing adolescents' eating habits and suggest which of these must be considered in order to develop tailored nutrition interventions, improving adolescents' consciousness aimed at adopting a healthy lifestyle. **Key words**: DIETARY QUESTIONNAIRE, EDUCATIONAL PROGRAMS, EATING HABITS AND BEHAVIORS, ADOLESCENTS.

INTRODUCTION

As we now the diet and nutrition play important roles in maintaining health and preventing diseases (OMS/WHO, 2003; DA& US DH& HS, 2002). Decrease in morbidity and mortality associated with lifestyle diseases may be achievable if satisfactory nutritional habits are adopted in early life and maintained in the long term (Bertsias et al., 2005; Gliksman et al., 1993). During adolescence, young people are assuming responsibility for their own eating habits, health attitudes and behaviors (Fleming-Moran & Thiagarajah, 2005). In fact, attitudes play an important role in the adoption and maintenance of a variety of health and nutritional habits. Although adolescents' growing independence is often associated with unconventional eating patterns (Veugelers et al., 2005; Kubik et al., 2005) and dietary behavior during adolescence, might be transitory in some individuals, health-related behaviors show tracking through adolescence (Kelder et al., 1994) and there is clear evidence of their early consolidation. In a random sample of 1682 teenagers in Scotland, (Sweeting et al., 1994) found that overall changes in eating habits between 15 and 18 years were very slight, though females were more likely to have increased consumption of foods consistent with current recommendations. The authors concluded that dietary habits appear to be established in the mid-teens, by the age of 15 years, and are closely associated with lifestyle. We can say that if habits acquired in adolescence persist into adult life, behaviors established in young people may have important long-term consequences for health. Knowledge about healthy food choices and food safety can be predisposing factors for improving eating habits and adopting a healthy diet (Prell et al., 2005), although it is insufficient to motivate healthy eating (Niciforovic-Surkovic et al., 2002). Factors influencing eating behaviors need to be better understood to develop effective nutrition interventions tailored to individuals to improve their healthy eating (Story et al., 2002). Therefore, determinants such as habits, attitudes, self-efficacy, barriers to change and the meaning of "healthy" and "unhealthy" diet and food must be considered.

An important determinant of the practice of healthy behaviors is a sense of self-efficacy, which is the belief that an individual can control his own practice of a particular behavior (Bandura, 2004; Bandura et al., 2003). In fact, motivation to adopt healthy eating patterns and self-efficacy are important determinants of behavioral change (Kristal et al., 1999; Glanz et al., 1998). Strecher et al. (1986) found strong a relationship between self-efficacy and both change and maintenance of behavior, as well as Rimal RN (2000) having pointed out that knowledge-behavior correlations were greater among those with high self-efficacy, when compared with those with low self-efficacy. Recognition of barriers to change is among the enabling factors affecting food choices. Croll et al. (2001) found that barriers to healthy eating in adolescents include a lack of time, limited availability of healthy foods in schools and a general lack of concern about following healthy eating recommendations. The authors suggest that interventions are needed which assist adolescents in translating good nutritional knowledge into healthy behaviors. According to Zhao et al. (2001), nutritional knowledge, as well as some dietary behaviors and lifestyle of adolescents, improved greatly after a nutrition education program, changing students' unhealthy living attitudes and dietary habits. In the present study we evaluated eating habits, physical activity, meaning of healthy and unhealthy dietary habits and food, self-efficacy, possible barriers affecting healthy food choices in a selected group of adolescents in Tirana, Albania. In addition, adolescents' weight and height were measured to compute BMI to investigate the possible relationship between BMI and the above mentioned variables.

MATERIAL AND METHODS

Sampling
The study was carried out as part of a wider nutritional surveillance project that also included several nutritional assessment measurements, such as anthropometric (body weight and body height). All students

were surveyed over the course of four months, from March to the end of June 2012. Three hundred and forty subjects, 180 males (52.3%), and 160 females (47.7%), participated in the study. This was a cross-sectional study, aware of the limitations included in such kind of study, in that it may not always be possible to distinguish whether the exposure preceded or followed the diseases. Informed written consent was obtained from each student and their parents.

Data Collection
1. Questionnaire
A dietary questionnaire previously constructed and tested with regard to its reliability (Turconi G et al., 2003) was self-administered during school time. It is divided into seven main sections. *Except for section 1 that contained information on personal data collected by means of seven questions*, the other sections contained 52 items overall.

Section 2 - Eating habits: consisting of 13 questions. This section was designed to investigate the food habits of the adolescents, especially regarding breakfast contents, number of meals a day, daily consumption of fruit and vegetables as well as soft beverages.

Seven of the questions had the following response categories: always, often, sometimes, never; the other 6 have instead 4 response categories structured in different ways.

The score assigned to each response ranged from 0 to 3, with the maximum score assigned to the healthiest one and the minimum score to the least healthy one. The total score of this section was 39.

Section 3 - Physical activity: it contained 6 questions aimed at investigating physical activity levels. All responses were structured in different ways according to each question, each score ranging from 0 to 3, with the maximum score assigned to the healthiest habit. The total score of this section was 18.

Section 4 - Healthy and unhealthy dietary habits and food: consisting of 5 questions aimed at investigating the students' beliefs about healthy and unhealthy diet and food. Each question had 4 different responses, with the score ranging from 0 to 3. The total score of this section was 15.

Section 5 - Self-efficacy: it contained 8 questions with 3 response categories and the following scores: no = 0, I don't know = 1, yes = 2. This section was aimed at estimating how much each student is able to assume attitudes and behaviors that could improve his or her health status related to nutrition. The total score was 16.

Section 6 - Barriers to change: consisting of 9 questions with 2 response categories and the following scores: yes = 0, no = 1; the questions aimed at investigating what difficulties, if any, the adolescents had in modifying their eating habits in order to improve them. A score of 1 was assigned to the major barrier towards change; in this way greater barriers to change were related to higher scores. The total score of this section was 9.

Section 7 - Nutritional knowledge: it contains 11 questions, each with 4 response categories structured in different ways. This section focused on various nutritional aspects, aimed at investigating the level of knowledge that the students had in those schools of Tirana. The response categories were 4, scoring 1 for each correct answer and 0 otherwise. The total score of this section was 11.

As a measure of internal consistency of each questionnaire section, in a previous study [43] we computed Cronbach's alphas, while Pearson's correlation was used as a measure of temporal stability. Cronbach's alphas ranged from a minimum of 0.55 (section 6) to a maximum of 0.75 (Section 2), the sections with a poor internal consistency being sections 6 and 7. Pearson's correlation, used to assess test-retest reliability for each of the sections, was very high: Pearson's correlation coefficients ranged from a minimum of 0.78 to a maximum of 0.88, indicating a very good temporal stability of the questionnaire. All Pearson's correlation coefficients were statistically significant with $p < 0.01$.

The total score of each section was divided into tertiles, with the lowest tertile assigned to the worst evaluation and the highest to the best evaluation, except for section 6 (barriers to change) for which the greater barriers to change were related to the highest tertile.

The study was carried out as a part of a wider nutritional surveillance project with the cooperation of both the school teachers and the parents. Before starting the study, many meetings were organized with teachers and students to explain the aim of the research and to request their participation.

The questionnaire was self-administered during school time under the supervision of the teacher and of a dietitian. In order to minimize the possibility of bias, all supervisors had received 5 hours of instruction about the questionnaire and were standardized in answering any of the adolescents' questions if explanations were needed.

A self-administered questionnaire makes it more difficult to verify response truthfulness (Amstrong et al., 1995). Since the questionnaire was completed under the teacher's and dietitian's supervision, checking that the students completed all the answers, non-response rate was equal to zero. Completing the questionnaire took about 55 minutes.

2. Weight and Height Measurements for BMI Calculation
Students' weight and height were measured by teachers of physical education according to standard conditions after setting up a classroom. Body weight was measured on subjects wearing only underwear and without shoes by means of a steelyard scale (precision ± 100 g); body height was measured on subjects without shoes by means of a stadiometer (precision ± 1 mm). BMI was calculated as a ratio between weight and height squared with weight in kilograms and height in meters.

Reference Standards
Eating habits, physical activity, meaning of healthy and unhealthy dietary habits and food, food safety and behavior in hygiene practices were evaluated by comparing them with the Dietary Guidelines for Italians' Healthy Diet (because we don't have an Dietary Guidelines for Albanians Healthy Diet) (Linee Guida per una Sana Alimentazione Italiana, 2003). According to the International Obesity Task Force (IOTF) (Dietz & Robinson, 1998; Bellizzi & Dietz, 1999), Cole's age-specific cut-off point's reference standard for BMI (Cole et al., 2000) was used to identify overweight and obesity in young age. Cole's curves were drawn so that at age 18 years they passed through the widely used cut off points of 25 and 30 kg/m^2 for overweight and obese adult. The resulting curves were averaged to provide age and sex specific cut off points from 2-18 years (Cole et al., 2000). The IOTF suggests (Dietz & Robinson, 1998) that Cole's cut off points are less arbitrary and more internationally based than current alternatives and will help to provide internationally comparable prevalence rates of overweight and obesity in children and adolescents.

Data Analyses

The scores obtained in each section are expressed as mean ± standard deviation. The percentage distribution of students in each tertile score was calculated by using the statistical Package for the Social Sciences (SPSS) (SPSS for Windows, 2000). T-Student test was calculated to investigate differences in scores obtained by males and females, normal and overweight plus obese subjects; Pearson's correlation coefficients were computed to analyze the relationship between BMI and the investigated variables.

RESULTS

Sample

Characteristics of the sample are shown in Table 1. Group mean age is 15.2 ± 0.5 years and BMI mean value is 22.6 ± 3.2 kg/m2 for males and 21.5 ± 2.6 kg/m2 for females. According to Cole's cut-off points reference standard for BMI (Cole et al., 2000), 20.9% of males and 14.7% of females are overweight, and 5.2% of males and 2.6% of females are obese. As far as underweight is concerned, Cole does not give any suggestion, and we decided to judge underweight subjects as those under the 3rd centile, therefore 0.9% of males and 3.8% of females are underweight.

Table 1. Sample Characteristics.

Variables	Males (n = 180) mean ± SD	Females (n = 160) mean ± SD
Age (years)		15.3 ± 0.5
	15.2 ± 0.5	
Weight (kg)	66.2 ± 8.5	56.3 ± 6.3
Height (m)		1.62 ± 0.08
	1.71 ± 0.08	
BMI (kg/m^2)	22.6 ± 3.2	21.5 ± 2.6
Overweight subjects' BMI (kg/m^2)	25.8 ± 1.4 (20.9%)	25.9 ± 1.8 (14.7%)
Obese subjects' BMI (kg/m^2)	31.7 ± 1.4 (5.2%)	30.9 ± 2.5 (2.6%)
Underweight subjects' BMI (kg/m^2)	16.1 ± 0.3 (0.9%)	15.8 ± 0.5 (3.8%)

97% of the students live in a traditional family, while the others (3%) live either with the mother or with the father or with grandparents.

Dietary Questionnaire

Table 2. Percentage Distribution of Subjects according to Tertile Scores.

Questionnaire sections	1st tertile	2nd tertile	3rd tertile
2. Eating habits	7.1% (25)	59.8% (203)	33.1% (112)
3. Physical activity and lifestyle	30.4% (104)	52.8% (179)	16.8% (57)
4. Healthy and unhealthy habits and food	13.0% (45)	57.2% (194)	29.8% (101)
5. Self-efficacy	14.9% (51)	24.7% (84)	60.4% (205)
6. Barriers to change	2.8% (9)	15.5% (53)	81.7% (278)
7. Nutritional knowledge	42.2% (143)	49.9% (170)	7.9% (27)
LEVEL	LOW	MEDIUM	HIGH

Eating Habits.
The total score (39) was divided into tertiles, where the lowest one referred to "inadequate eating habits", the medium one referred to "partially satisfactory eating habits" and the highest one referred to "satisfactory eating habits". The mean score obtained is 25 ± 5, without any statistically significant differences between males and females. 7.1% of the students show "inadequate eating habits", 59.8% have "partially satisfactory eating habits", while only slightly more than one third of the sample (33.1%) show "satisfactory eating habits". The worst eating habits are skipping breakfast (about 24% of the sample); 37.4% of males and 46.1% of females do not drink milk or yogurt at breakfast; 72.5% of the subjects do not eat at least two portions of fruit and vegetables every day. With about 29% of the sample, consumption of cakes and sweets is too high, in that a dessert or cake is always consumed at each meal.

Physical Activity and Lifestyle.
The total score (18) was divided into tertiles, where the lowest one referred to "sedentary physical level", the medium one referred to "partially moderate physical level" and the highest one referred to "active physical level". The mean score obtained is 11 ± 2, without any statistically significant differences between males and females. A statistically significant difference was found between normal and overweight plus obese boys, with the highest score obtained by normal weight boys (12 ± 2 vs. 11 ± 2) (p = 0.03). Only 16.8% of the students have a very active lifestyle, while about one third (30.4%) show a sedentary physical level, not consistent with a healthy lifestyle. In response to the question "what do you prefer to do during free time?" 49.9% of the sample answered watching television, using the computer, listening to music, few reading a book, while only 19.7% reported practicing a sport and 16.9% going for a walk. In general, males are more active than females: 22.3% versus 15.1%; in response to the question "Do you usually practice a physical activity?". 40.9% and 27.3% respectively of males and females answered "always".

Healthy and Unhealthy Dietary Habits and Food.
The total score (15) was divided into tertiles, where the lowest one referred to "little comprehension of the meaning of healthy and unhealthy dietary habits and food", the medium one referred to "sufficient comprehension of the meaning of healthy and unhealthy dietary habits and food" and the highest one referred to "good comprehension of the meaning of healthy and unhealthy dietary habits and food". The mean score obtained is 11 ± 2, without any statistically significant differences between males and females. Slightly more than half of the sample (57.2%) have sufficient comprehension of the meaning of healthy and unhealthy diet and food, while only one third (29.8%) have a good comprehension, with a higher proportion among females (37.3% v. 21.7%). In response to the question:" According to you, which is a healthy diet?", 65.4% of the sample answered correctly (a healthy diet is a diet rich in different foods), nevertheless only 34.6% of the subjects reported eating a varied diet every day, as section 2 (eating habits) indicates. Regarding the question "According to you, which is a healthy food?", 34.5% reported that "a food rich in protein" is the healthiest one, 9.2% chose "a food rich in calories", 29.4% "a microbiologically tested food" and 26.9% "a food without preservatives and additives".

Self-Efficacy.
The total score (16) was divided into tertiles, where the lowest one referred to "incapacity for using advice aimed at improving one's well-being", the medium one referred to "sufficient capacity for using advice aimed at improving one's well-being" and the highest one referred to "good capacity for using advice aimed at improving one's well-being". The mean score obtained is 13 ± 3, without any statistically significant differences between males and females. A good percentage of the subjects (60.4%) reported being able to use advice aimed at improving their well-being, while 14.9% think they are not able to do this. In response to the question:" Do you think you are able to modify your diet, if needed?", 16.5% answered "I'm not able" and 31.8% " I don't know".

Barriers to Change.
The total score (9) was divided into tertiles, where the lowest one referred to "no barriers in modifying one's own eating habits with the aim of improving them", the medium one referred to "some barriers in modifying one's own eating habits with the aim of improving them" and the highest one referred to "a lot of barriers in modifying one's own eating habits with the aim of improving them". The mean score obtained is 3 ± 2, without any statistically significant differences between males and females. 81.7% of the students have no barriers to change, with a higher proportion among females (84.8 % vs. 78.5%); 15.5% have some barrier to change, with a higher proportion among males (19.5% vs. 11.4%).

Nutritional Knowledge.
The total score (11) was divided into tertiles, where the lowest one referred to "insufficient nutritional knowledge", the medium one referred to "good nutritional knowledge" and the highest one referred to "quite good nutritional knowledge". The mean score obtained is 7 ± 2 with a statistically significant difference (p < 0.05) between males and females (6 ± 2 for males v. 7 ± 2 for females). About half of the subjects (49.9%) have good nutritional knowledge (most females), but 42.2% of the students (most males) have insufficient nutritional knowledge. Only 7.9% of the sample have quite good nutritional knowledge (higher among females). The most frequent mistakes related to dietary fiber, food protein content and energetic values. In response to the question "Which is the nutrient that contains the most energy?", only 15.9% of the students answered fats, 46.2% said carbohydrates and 37.9% answered protein.

Dietary Questionnaire and BMI

Dietary questionnaire scores were analyzed in relation to students' BMI, considering two groups: normal weight subjects versus overweight plus obese subjects. No statistically significant differences emerged between the two groups for any sections of the dietary questionnaire except for section 3 relating to physical activity, for which normal weight boys obtained higher score (12 ± 3 score) than overweight plus obese ones (11 ± 3 score) (p = 0.03). In addition, no significant correlation (p = N.S.) emerged between scores obtained in each section and BMI values, except for section 4 (healthy and unhealthy dietary habits and food) where a negative correlation was found for the total sample (p<0.001; R= −0.71).

DISCUSION

The present study of 340 (15-years old) students provided results with implications for designing programs for health promotion and improvement in nutritional habits for adolescents.

The sample contains a slightly higher percentage of females than males, which reflects gender distribution in the Tirana population. Most of the students live in a traditional family. Parents' educational level is not high.

As far as BMI is concerned, most of the adolescents are in the normal range of values according to Cole's reference standards (Cole et al., 2000), while prevalence of overweight subjects in both sexes is high, but higher in males. On the other hand, the prevalence rate of obese adolescents is low. Nevertheless, the high percentage of overweight subjects is worrying, and preventive and corrective strategies need to be undertaken in school programs aimed at weight control and therefore at reducing this risk condition. A few subjects are underweight under the 3rd centile, including just two male and six females, highlighting that overweight is undoubtedly the most important problem in Albania capital. Our results can be explained by the fact that, even though our subjects live in a capital area, they mostly have a sedentary lifestyle as shown from the results of section 3 of the questionnaire. In addition, foods such as cheese rich in fats, sausages, butter and specially meat are traditional components of Albania.

Overweight and obesity were not related to scores obtained in the dietary questionnaire, except for physical activity level in males as well as for beliefs about healthy and unhealthy diet and food in both sexes, which influence overweight and obese adolescents in making unhealthy food choices.

Data on eating habits show a low intake of milk and yogurt at breakfast as well as of fruit and vegetables and high consumption of cakes and sweets. In addition, about 24% of the adolescents do not have breakfast every day. These results are inconsistent with the Dietary Guidelines for Albanians' healthy diet (Linee Guida per una Sana Alimentazione Italiana, 2003).

As far as physical activity and lifestyle are concerned, though most adolescents have moderate physical levels, about one third of the students show a sedentary lifestyle, with a higher proportion among females. This result represents a typical adolescent habit consisting in spending many hours in sedentary activities (watching television, using the computer, listening to music, reading a book) (Robinson et al., 1993). Watching television has been linked with an unhealthy diet, high cholesterol levels (Wong et al., 1992) and overweight and obesity (Fleming-Moran & Thiagarajah, 2005; Gortmaker, 1996). This may be influenced by unhealthy nutrition messages in commercials (Lank et al., 1992), eating snack foods and decreased physical activity (Robinson et al., 1993). The meaning of healthy and unhealthy dietary habits is sufficiently known by the students, while the meaning of healthy food is less clear: in fact, 36.5% of the subjects report

that a food rich in protein is the healthiest one. Our results are similar to those of Croll et al., (2001) who found, in a sample of 203 American adolescents attending senior high schools, that adolescents have a significant amount of knowledge regarding healthy habits as they believe that healthy eating involves moderation, balance and variety. Despite this knowledge, they encounter barriers to healthy eating, above all a general lack of concern about following healthy eating recommendations. Our results suggest that lay understanding of healthy eating does generally conform to dietary guidelines, and therefore health promotion priorities should focus on physical and psychological constraints to healthy eating, rather than attempting to increase the adolescents' knowledge as a whole.

Perceived self-efficacy, i.e. the belief that an individual may carry out a specific behavior, was strongly related to healthy eating patterns (Bandura, 2004; Kingery, 1990). This finding is consistent with the reports showing self-efficacy to be a key factor in the eating behavior of middle aged women, (Shannon, 1990). We found no significant statistically difference associated with gender in line with the report of Kingery (1990) in his study on college students, but in contrast with the results of Gracey et al. (1996) who reported that boys had significant lower self-efficacy scores than girls. In our study, perceived self-efficacy in modifying one's own diet, if needed, has to be improved, in agreement with the results of Roach et al. (2003) who found that using behavioral techniques to improve self-efficacy can be effective in weight loss promotion and can produce positive outcomes.

Barriers to change must also be considered in planning nutrition education programs. The lack of students' knowledge about increasing dietary fiber ingestion is the greatest barrier to change, followed by ignorance on how to satisfy their own energy expenditure and how to improve their own diet. Strategies for reducing dietary intake of sugar, fats and cholesterol are known by only one quarter of the students. Nevertheless, in general, 81.7% of the subjects report that they have no barriers to change, leading one to think that the questionnaire somehow underestimated barriers against change. In a cross-sectional study (Thomas, 1994) carried out in the 15 member states of the European Union on approximately 1000 adults, including subjects aged 15 years, the most frequently mentioned perceived barriers to healthy eating concerned time and taste factors, while a lack of knowledge about healthy eating was not selected by many as an important barrier. Time-related factors were more important for younger respondents. Our results show no statistically significant differences between males and females, and thus are different from those of Gracey et al. (1996) who showed that girls ranked barriers to change higher than boys and identified some different barriers they considered important.

Nutritional knowledge is a predisposing factor for eating behaviors (Brug et al., 2006), even though voluntary behavior improvement requires motivation, ability as well as the opportunity to improve one's own behavior (Wardle et al., 2004). Our girls have better knowledge than boys, perhaps because they are more involved in meal preparation and in general they look after their body image more than boys. Our results are in agreement with those of Wardle et al. (2005) who showed that women attached greater importance to healthy eating than men and concluded that gender differences appear to be partly attributable to women's greater weight control involvement. Ignorance about some nutrient content of foods, particularly concerning dietary fiber and protein, as well as about food energy content, indicates adolescents' difficulties in translating nutritional advice into food choices in order to satisfy their own energy expenditure and to improve their own diet.

Individual character and personality are decisively formed during adolescence. Young people begin to assume responsibility for their own food habits, health-related attitudes and behaviors. Planning an incisive nutritional intervention on a selected sample of the population requires identification of its nutritional

problems and primary needs. Our study highlighted an extensive view on eating habits and behaviors of 15-year-old adolescents living in Tirana in order to point out the most important unhealthy behaviors for planning nutrition education programs, aimed at the promotion of good health and well-being in adult life. The topics which could be targeted for intervention are related to body weight control, including a body weight decrease in overweight and obese adolescents, by means of adopting healthy eating habits and behaviors and increasing physical activity. Also, current eating habits must be targeted for intervention, in particular by increasing intake of milk products, fruit and vegetables, decreasing sweet cake ingestion and promoting breakfast consumption. Students need education about food nutrient and energy contents in order to make appropriate food choices. The students' lack of knowledge about foods, rather than dietary habits, suggest that foods should be a focus for nutrition education programs.

In general, females value health more than males and more readily adopt preventive health strategies (Finnegan et al., 1990). Females also acquire knowledge about healthy eating in response to a nutrition education program more satisfactorily than males.

CONCLUSION

In conclusion, different aspects of adolescents' eating behavior may be influenced by different factors, which need to be considered in designing nutrition promotion programs. Nutrition and health professionals should tailor educational and treatment strategies according to the specific desired dietary outcomes. Interventions should help to make healthy eating easy for adolescents to apply and explain the consequences of unhealthy eating in terms that they value, stressing meaningful short and long-term benefits for human health, providing knowledge, increasing consciousness of healthy eating and, lastly, supporting the adolescents in the adoption of healthy lifestyle.

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