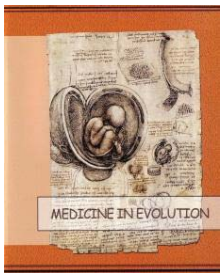
Oral Health Behaviour in Adolescents



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Abstract

Background: In adolescence, intense biopsychosocial modifications place adolescents in one of the groups that are most vulnerable for social and health problems. Habits acquired in this period have repercussions on future dimensions, such as diet, self-image, individual health, values, preferences, and psychosocial development. At this stage, times of neglect with health care become commonplace. While behaviors that contribute to oral health maintenance are reduced, the prevalence of alcohol and tobacco use becomes alarming and affects the health of these young people The aim of the research was to improve the oro-dental health of primary school children in Arad County and to assess the impact of oral health on their quality of life.

Material and Methods: We conducted a prospective cohort epidemiological study, conducted in Arad between 2017 and 2019 and included a sample of 832 subjects, middle school students aged 11 to 13 years whose behaviour was analyzed compared to the factors of risk to oro-dental health.

Results: It was observed that variations in the frequency of food consumption show statistically significant changes, depending on the sex of the subjects, in the case of consumption of refined fruits and sweets, so that 47.4% girls consume fruit daily compared to only 36.3% boys, and 27% even a few times a day (x^2=10,973, DF=4, p=0,014)

Discussion: The analysis of socio-behavioral factors showed an above average level of students' knowledge regarding the maintenance of oral health, but the degree of their application in practice is quite low. Thus, an aspect with a strong impact on the oral health of students is the sources of information on maintaining oral health.

Conclusions: Adolescents show a significantly increased degree of autonomy, with not exactly correct attitudes towards sanogenic behavior, although they know the data related to the cariogenic effect of certain foods or habits.

Keywords: adolescents, sanogenic behavior, quality of life, oral health.

INTRODUCTION

In adolescence, intense biopsychosocial modifications place adolescents in one of the groups that are most vulnerable for social and health problems [1, 2]. Habits acquired in this period have repercussions on future dimensions, such as diet, self-image, individual health, values, preferences, and psychosocial development [3, 4]. At this stage, times of neglect with health care become commonplace [5]. While behaviors that contribute to oral health maintenance are reduced, the prevalence of alcohol and tobacco use becomes alarming and affects the health of these young people [6, 7].

In Romania, the increase in the incidence of dental caries is undoubtedly due to a causal conjuncture represented by the combination of direct and indirect risk factors, manifested by economic, demographic and nutritional transitions, incorrect habits for oral care, limited use of fluoride and lack of oral health services. Differences in oral health and use of services exist for population groups of all ages, and among adolescents in particular [8].

In our country, a significant proportion of children are served, but are not adequately targeted by the prevention of oral diseases and health promotion in the context of public health programs [9; 10].

Oral health education is a key element in health promotion and requires strong planning based on theories of medical behavior [11- 13]. Oral health has been shown to be easily integrated into such school health activities. [14- 16]. A handbook on how to integrate oral health in schools, as well as recommendations on how to assess oral health promotion in the community and disease prevention were developed by WHO [17- 19].

Oral health education is offered in a variety of ways, using a wide range of techniques and materials that address oral health topics, ranging from nutrition, oral hygiene, tobacco, oral health benefits, oral piercings. Diet and oral hygiene and its impact on oral health are probably the most addressed. Oral health education must be based on the principles of active involvement and consolidation. Many studies show that orthodontic health education for children can have a limited impact [20; 21].

If oral health education is combined with additional activities and is provided on a regular basis, health education can have a positive impact on oral health behavior and adolescents' oral health. [22, 23].

The aim of the research was to improve the oro-dental health of primary school children in Arad County and to assess the impact of oral health on their quality of life.

MATERIAL AND METHODS

In order to achieve the proposed goal and objectives, we conducted a prospective cohort epidemiological study.

The study was conducted in Arad between 2017 and 2019 and included a sample of 832 subjects, middle school students aged between 11 and 13.

The sample was selected so as to ensure representativeness in terms of sex and the level of education of parents for the school population of 11-13 years in Arad. The sample used had a mixed, complex structure. The selection methodology was built in three stages, thus:

- The first stage: by the quota method [80], a representative sample of six school units was selected, from the ultra-central area to the peripheral areas of Arad County, middle schools and high schools;
- Step two: in each school a number of classes was randomly selected to be included in the sample;

Stage three: each selected class of students was randomly assigned (by drawing lots) one of the four educational programs.

Table 1. Distribution of parents' level of education according to students' gender

Upper Arch	Male	Female	*p*-value	Difference Significance
IC	8,57±0,52	8,45±0,55	>0,05	IS
IL	6,93±0,53	6,73±0,58	>0,05	IS
C	7,73±0,38	7,63±0,42	>0,05	IS
PM1	6,85±0,40	6,78±0,48	>0,05	IS
PM2	6,39±0,42	6,34±0,43	>0,05	IS
M1	10,47±0,53	10,35±0,52	>0,05	IS

The interdependence between gender, age, level of education of the families from which the students come (for example the distribution of the level of education of the parents does not differ significantly for the sub-samples of girls and boys x^2= 0,739, DF=2, p = 0,691, etc.)

RESULTS

Regarding the degree of anxiety about dental treatment, 76.25% of students say they go to the dentist, without fear of pain during treatment, but 21.3% of students say they are afraid of pain when performing dental treatment (Fig 1.).

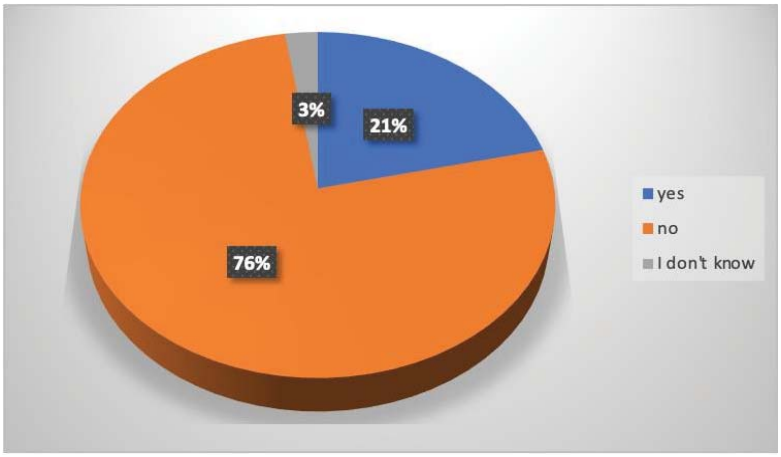

Figure 1. The distribution of the variant of answer to the assertion "I am afraid to go to the dentist due to the possible pain", for 832 students aged 10-13

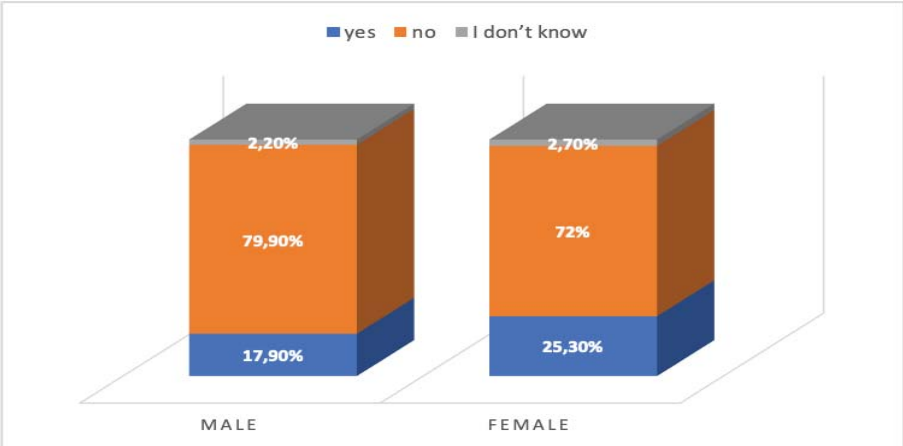

Figure 2. Distribution of answers to the assertion "I am afraid to go to the dentist due to possible pain", depending on gender

In conclusion, we can see that there are significantly more girls (25.30%) who have anxiety about dental treatment compared to boys (17.9%). Dental anxiety is constantly

encountered in children under 3 years of age, but it also manifests in older children, registering a maximum frequency at the age of 11 and gradually decreasing in adolescence. In northern Europe, the prevalence of dental anxiety in children and adolescents was estimated to be between 3-21%, being more common in girls [24]. As they get older, children develop methods of control [25]. In Sigapore, 14% of 10-14 year olds have a high level of anxiety about dental treatment, and girls were 2.64 times more anxious than boys. [26].

The parents of the students, in proportion of 66.80% are the ones who established the last visit to the dentist, a much lower percentage, of approximately 19.30% students state that the treatment sessions were established by the dentist himself, and 12.80% of students established the treatment sessions themselves, reflecting the low degree of autonomy of the child. All this is underlined by the fact that the mother (68.70%) is the one who accompanied the student at the last treatment session, the father only in proportion of 23.10% of cases, while the student goes to the doctor unaccompanied, in 8.2 % of situations, as an expression of the child's degree of autonomy.

Regarding the eating behavior, 27.52% students consume refined sweets daily, 23.13% consume carbonated juices daily and 14.34% students consume biscuits and pastries several times a day. Regarding the frequency of ingestion of sweetened beverages, 19% of students consume tea with sugar and 15.63% consume milk with sugar several times a day. On the other hand, 42% of students eat fruit daily and 21.06% eat fruit only two or three times a week, and 0.39% students do not eat fruit at all (Fig 3).

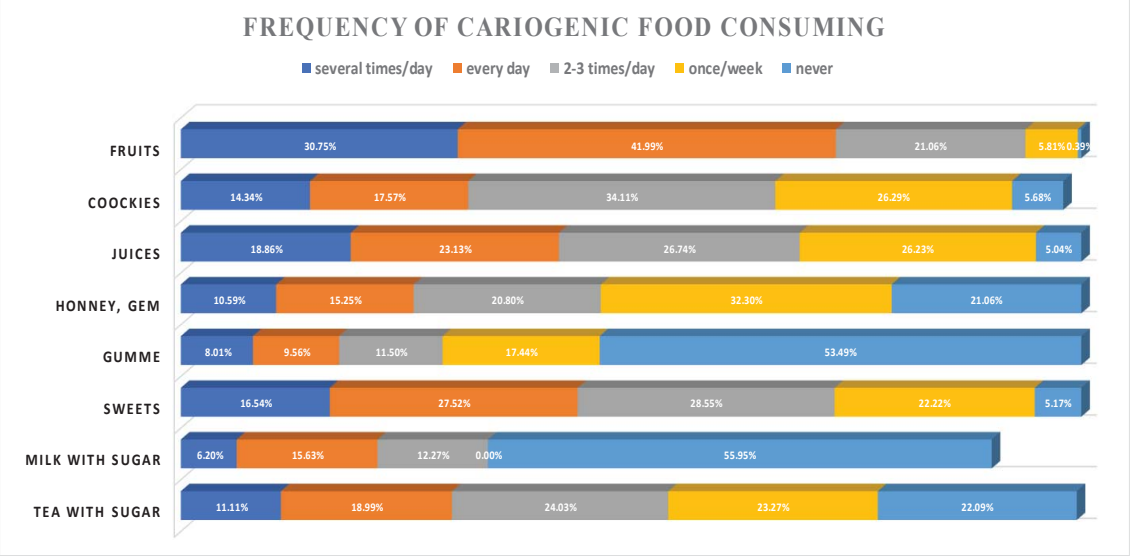

Figure 3. Distribution of answer options to the question "How often do you eat the following foods?", for 832 students aged 10-13

We note that variations in the frequency of food consumption show statistically significant changes, depending on the gender of the subjects, in the case of consumption of refined fruits and sweets, so that 47.4% girls consume fruit daily compared to only 36.3% boys, and 27 % even a few times a day ($\mathbf{x}^2$=10,973, DF=4, p=0,014)

The behavior towards risk factors involved in the etiology of oro-dental diseases, smoking was found that 95.45% of students are non-smokers, while 0.12% of students smoke daily, 2.13% several times a week and 2.10% several times a month. It should be noted that the percentages depend significantly on the gender of the subjects, so that 100% of girls are non-smokers and 97.9% of boys are non-smokers, 0.3% smoke several times a week, 1.3% smoke several times a month and 0.5% smoke on a daily basis ($\mathbf{x}^2$=8,601, DF=3, p=0,035).

DISCUSSIONS

The analysis of socio-behavioral factors showed an above average level of students' knowledge regarding the maintenance of oral health, but the degree of their application in practice is quite low. Thus, an aspect with a strong impact on the oral health of students is the sources of information on maintaining oral health. In the present study, the family is the main source of information on maintaining the oral health of students in the proportion of 84.10%, relatives provide this information in proportion of 29.20%, friends in proportion of 11%, and teachers in proportion of 8.3%. Also, the specialized medical staff are sources of information in proportion of 63% the dentist and only 6.3% the hygienic nurse, a similar proportion being in the case of the family doctor, 6.1%. Regarding the information sources in the media, the highest percentage is held by the audio-visual press, respectively TV, radio-10.10%, followed by the written press, newspapers and magazines, with 7.60%. As regards the addressability behaviour of students to the dentist, in the present study were highlighted aspects related to the frequency and reason for visits to the dental office. Thus, 24.55% of students went to the dentist only once, a similar proportion of 23.51 went to the dentist twice and a significant percentage, 21.83% of them went to the dentist more than four times. Also, a percentage of 7.25% of students did not go to the dentist in the last year, a proportion of about 60.6% of students went to the dentist for dental or gingival pain and only a percentage of about half of the first, 23.30% of students went to the dentist for prophylactic treatment. If we refer to sanogenic practices and habits, we notice that in the initial stage of this study, approximately 65% of students say they brush their teeth two or more times a day, 25.32% of students say they brush their teeth once a day, and 7.36% of students say they brush their teeth several times a week. Regarding eating behavior, in the present study 27.52% of students consume refined sweets daily, 23.13% consume carbonated juices daily and 14.34% students consume biscuits and pastries several times a day. Regarding the frequency of ingestion of sweetened beverages, 19% of students consume tea with sugar and 15.63% consume milk with sugar several times a day. On the other hand, 42% of students eat fruit daily and 21.06% eat fruit only two or three times a week, and 0.39% students do not eat fruit at all.

CONCLUSIONS

Adolescents show a significantly increased degree of autonomy, with not exactly correct attitudes towards sanogenic behavior, although they know the data related to the cariogenic effect of certain foods or habits. Understanding the adolescent profile in health education is essential, given the scope of interest in knowledge.

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