

POVEZANOST NAVIKA U ZDRAVLJU I PRISUSTVO ORALNE PATOLOGIJE KOD DECE U CRNOJ GORI

CORRELATION OF HEALTH HABITS WITH PRESENCE OF ORAL PATHOLOGY IN CHILDRENS IN MONTENEGRO

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SAŽETAK

Uvod: Stanje usta i zuba je neodvojivi dio ukupnog zdravlja svakog pojedinca. Odredene navike, stavovi i ponašanja u vezi sa zdravljem počinju se formirati vrlo rano, u procesu primarne socijalizacije, tako da obitelj najvećim dijelom sudjeluje u njihovu formiranju.

Cilj rada: Utvrđivanje povezanosti između navike održavanja higijene usta i zuba i pojave promjena stanja zdravlja usta i zuba kod djece školskog uzrasta u Crnoj Gori.

Materijal i metode: Istraživanje je oblikovano kao studija presjeka, uz korištenje metode intervjua prilagođene za epidemiološko istraživanje na terenu. Kao instrument istraživanja korištena je anketa - intervju, dok su podaci o oralnom zdravlju ispitivane djece dobiveni uobičajenim stomatološkim pregledima, prema metodologiji SZO školske djece.

Rezultati: Stanje zdravlja usta i zuba anketiranih učenika u odnosu je s njihovim zdravstvenim navikama, stavovima i ponašanjem: prisustvo ostvarenih rizika za pojavu oralnih oboljenja u visokom je postotku očekivan s obzirom na njihove zdravstvene navike, stavove i ponašanje. Rizik za pojavu oralnih oboljenja je očekivan, s obzirom na to da djeca nemaju izgrađene osnovne zdravstvene navike i stavove koji bi bili obrasci za sigurnost oralnog zdravlja.

Zaključak: Djeca nemaju izgrađene pozitivne zdravstvene navike:

- oralnu higijenu ne održava redovito više od 50% ispitanika, a oni koji to ipak čine, kao razlog navode „prisilu“ od strane roditelja;
- djeca daju prednost hrani bogatoj ugljikohidratima, osobito slatkima i šećerima, koje konzumiraju često, posebno u međuobrocima, poslije čega ne provode adekvatnu oralnu higijenu;
- kod svakog drugog djeteta već je prisutna neka ortodontska anomalija i dijagnosticiran gingivitis;
- broj prisutnih karijesnih mliječnih zuba kreće se od 2 - 8, dok broj prisutnih karijesnih stalnih zuba iznosi od 1 - 4 po jednom djetetu prvog razreda, a uzrastom raste broj karijesnih stalnih zuba.

Ključne riječi: oralna higijena, karijes, zdravstvene navike.

ABSTRACT

Introduction: The condition of the mouth and teeth is an inseparable part of the whole health condition of any individual. Habits, attitudes and behavior regarding the health of the mouth and teeth begin to form very early, during the primary socialization and because of that the family plays very important role in it.

Aim: The aim of this study was to determine the correlation of oral hygiene habits with occurrence of changes in condition of mouth and teeth in school children in Montenegro.

Material and methods: The research was designed as a cross-sectional study using the interview method adapted for epidemiological field research. Interview survey was used as a research instrument while the data on oral health of the examined children were obtained from regular dental check-ups of school children using WHO methodology.

Results: The condition of the mouth and teeth of surveyed children is in correlation with their health habits, attitudes and behavior: the presence of risk factors for occurrence of oral disease in high percentage is expected due to their health habits, attitudes and behavior. Risk of occurrence of oral diseases is expected because the children do not have formed basic health habits and attitudes which are the basis for oral health.

Conclusion: The children do not have formed positive health habits:

- More than 50% of the surveyed children have not practiced regular oral hygiene and those who have done that because they were „forced“ by their parents;
- The children are in favour of food rich in carbon-hydrates, especially sweets and sugar; which they consume very often usually between the meals and afterwards they do not practice good oral hygiene;
- Every other child has already had an orthodontic abnormality and diagnosed gingivitis;
- The number of milk teeth affected by caries is between 2 and 8 while that number for permanent teeth is between 1 and 4 per a child in the first grade. As they grow older the number of permanent teeth affected by caries also grows.

Key words: oral hygiene, caries, health habits

Uvod

Oralno zdravlje školske djece predstavlja značajnu socijalnu i ekonomsku vrijednost suvremenog svijeta. Na današnjoj razini razvoja

Introduction

Oral health of school children presents significant social and economic value for the modern world. Today's level of scientific and

nauke i tehnologije, moguće je učiniti korak naprijed, ukoliko se pojedinac i populacija u cjelini, preuzimajući odgovornost, aktivno uključe u zaštitu i unapređenje ukupnog zdravlja, uključujući i oralno zdravlje. Velika uloga oralnog zdravlja u održavanju dobrog ukupnog zdravlja ljudi danas je sasvim priznata i prihvaćena.

Oralni morbiditet predstavlja stanje bolesti organa usne šupljine pri kojem dolazi do narušavanja harmonije i biološke ravnoteže u djelovanju vanjskih ili unutarnjih činilaca, kao i poremećaja normalnih zbivanja u području usne šupljine. Za utvrđivanje zdravstvenog stanja ne postoje verificirane metode na temelju kojih bi se mogla dati pouzdana ocjena zdravstvenog stanja. Epidemiološka istraživanja su pokazala da više od 95% stanovništva boluje od zubnog karijesa i bolesti potpornih tkiva¹.

Zato se njezi i liječenju zuba poklanja velika stručna pažnja, u okviru općih mjera zdravstvene zaštite stanovništva. Svojim prisustvom i svojom funkcijom zuba, između ostalog, doprinose pravilnoj ishrani, pravilnom izgovoru i estetskom izgledu. Iako su, najvećim dijelom, sastavljeni od tvrdih, naizgled otpornih tkiva, oboljenja zuba su vrlo česta, a komplikacije tih oboljenja često ugrožavaju funkcije pojedinih organa, pa i cijelog organizma.

Zubni karijes je danas, bez obzira na dobro poznavanje prirode bolesti i moguće mjere prevencije, još uvijek najraširenija bolest naše civilizacije, od koje boluje i do 90% cjelokupnog pučanstva. Nasuprot tome moguća prevencija svih bolesti usne šupljine je preko 90% .

Jednu od najboljih definicija karijesa, koja istovremeno daje smjernice za njegovu učinkovitu prevenciju, dao je prof. Loesch: „Zubni karijes je kronična, kompleksna bakterijska infekcija koja rezultira miligramskim gubicima minerala iz zuba koji je zahvaćen infekcijom. Usprkos više čimbeničnoj prirodi ove infekcije, glavni čimbenici su bakterije i prehrambene navike koje osiguravaju da se bolest razvije i kao takva prepoznata². Vrlo često se spominje definicija po kojoj je zubni karijes, drugačije poznat kao truljenje zuba, jedan od najpreovlađujućih kroničnih bolesti ljudi širom svijeta; pojedinci su podložni ovoj bolesti tokom čitavog života.“

technological development makes possible a step forward only if an individual as well as the whole population take responsibility for active involvement in health protection and promotion which also includes the oral health. The important role of oral health in having a good health in general is well-known and widely recognized.

Oral morbidity presents the condition of oral cavity organs when there is disharmony and biological disbalance in acting of internal and external factors as well as the disturbance of normal processes in oral cavity. There are no verified methods for determination of health condition that can be used as basis for giving reliable assessment of health condition. Epidemiological research showed that more than 95% of population suffers from dental caries and supporting tissues diseases¹.

For that reason dental care and treatment attract attention of a lot of specialists in the framework of general measures for health protection of the population. Presence and functions of teeth among other things contribute to good nutrition, correct pronunciation and esthetic appearance. Although at the first sight it seems that teeth are made mostly of hard and resistant tissue, dental diseases are very frequent, and some disease complications often endanger the functions of some organs and sometimes the whole organism.

Despite a good knowledge of the nature of this disease and possible preventive measures dental caries is still the most frequent disease of our civilization nowadays and up to the 90% of the population suffers from it. However, possible prevention of all oral cavity diseases is over 90% .

One of the best definition of caries, which at the same times gives direction for its effective prevention, is the one given by Loesch: “Dental caries is a chronic , complex bacterial infection having as its result milligram loss of minerals in affected teeth.. Although there are several causes of this infection, the main causes are bacteria and health habits that are responsible for the development of the disease and enable the disease to be recognized as such². The definition often cited is that dental caries also known as dental decay is one of the most prevalent chronic diseases all over the world and individuals are susceptible to this disease as long as they live”.

Dostupna literaturna građa pokazuje da se oralno zdravlje djece odlikuje izrazito visokim stupnjem prevalencije i incidencije karijesa, kao jednog od najčešćih oralnih oboljenja³. Pri tome, vrlo je bitno naglasiti da je to oboljenje koje je preventabilnog karaktera.

Obitelj je prva sredina koja osigurava pojedincu njegovo fizičko, mentalno i socijalno formiranje, stjecanje znanja, vještina, navika i stavova, a kako se taj proces odvija tijekom cijelog života, može se sa sigurnošću reći da ono što je formirano u ranom djetinjstvu, najtrajnije je i najteže se mijenja⁴.

Edukacija roditelja i djece trebala bi biti početni dio aktivnosti na prevenciji bolesti usta i zuba. Tako se prvenstveno putem vrtića, škole i pedijatrijskih ambulanti, patronažne službe, roditeljima, ali i djeci, daju osnovne informacije i smjernice za očuvanje zdravlja zubi i važnost odlaska stomatologu na kontrolne preglede⁵.

Školsko doba je vrijeme kada se trajno stječu navike i kada je zdravstveno-odgojna informacija pružena u pravo vrijeme od velikog značaja⁶. Djeca moraju usvojiti da su usta ogledalo zdravlja i da nema potpunog zdravlja bez oralnog zdravlja⁷.

Prema osnovnoj, gotovo i jedinoj definiciji, karijes zuba predstavlja: „patološku destrukciju tvrdih zubnih tkiva s progresivnim tokom, šireći se sa zubnom caklinom i cementom u dentin, a kasnije i na zubnu šupljinu i periodoncijum s mogućim daljnjim komplikacijama koje ugrožavaju cijeli organizam“⁸.

Razumljivo je da od svih oboljenja usta i zuba najveći socijalno-medicinski problem predstavljaju karijes i parodontopatije, za sve kategorije stanovništva, a posebno za djecu⁹. Značaj karijesa kao socijalno-medicinskog oboljenja ogleda se u rasprostranjenosti sekundarnih oboljenja, od kojih su neka teže prirode i imaju visoku stopu invaliditeta. Ova se oboljenja dugo liječe i nanose velike štete i ekonomske gubitke, što treba imati u vidu kada se proučava značaj karijesa¹⁰. Postoji veliki broj rizičnih faktora za nastanak karijesa¹¹.

Dosadašnja istraživanja su pokazala da više različitih rizičnih faktora mogu istovremeno djelovati na jedno oboljenje, kao i da jedan rizični faktor može istovremeno utjecati na više oboljenja¹².

According to available research the oral health of children even today is characterized by high prevalence and incidence of caries as one of the most frequent oral diseases³. However, it is important to emphasize that it is a disease that can be prevented.

Family is the first environment to provide physical, mental and social development of an individual as well as acquisition of knowledge, skills, habits and attitudes. Although these are lifelong processes it should be pointed out that everything that is developed in the early childhood is the most lasting and the most difficult to change⁴.

Health education of parents and children should be the starting point in prevention of oral and dental diseases. Children and their parents are given the basic information and guidelines for protection of dental health and the importance of regular dental check-ups is stressed. This kind of information is provided by preschool institutions, schools, pediatric offices, patronage services to children but also to parents⁵.

Since schooling is the period when most habits are acquired permanently health education and information given at the right time are of utmost importance⁶. Children have to be aware of the importance of oral health and that no one is completely healthy without oral health⁷.

According to basic definition, up to recently almost the only one, caries is “ progressive pathological destruction of hard teeth tissues spreading from enamel and cementum to dentine and later affecting pulp and periodontium with possible further complications that can endanger the whole organism”⁸.

It is well known that caries and parodontopathy present the biggest socio-medical problem of all mouth and teeth diseases for the whole population and especially for children⁹. The importance of caries as a socio-medical disease is a result of an occurrence of secondary diseases. Some of these diseases are severe with high rate of disability. These diseases also require long-term treatment causing a lot of damage and economic loss. This should be taken into consideration when the importance of caries is studied¹⁰. There are a great number or risk factors for occurrence of caries¹¹.

Research so far has shown that more different risk factors can simultaneously affect a

Očigledno je da u prevenciji bolesti usta i zuba treba djelovati na sve navedene faktore: na uravnoteženu prehranu, svakodnevnu higijenu usne šupljine i zubi, kombiniranu primjenu fluorida i drugih preparata, a uz to se nameće potreba i redovitog posjeta stomatologu, najmanje jednom u šest mjeseci, kako bi se na vrijeme uočili i uklonili počeci kvara zuba, te na taj način ujedno i izbjegla ozbiljnija liječenja¹³.

Materijal i metode

Istraživanje je kao studija presjeka, uz korišćenje metoda intervjua prilagođene za epidemiološko istraživanje na terenu. Kao instrument istraživanja korištena je anketa - intervju, kao i stomatološki pregled usta i zuba za dobivanje podataka o oralnom zdravlju ispitivane djece. Odgovori dobiveni tokom intervjua korelirani su sa podacima dobivenim ispitivanjem zdravlja usta i zuba po protokolu dobre medicinske prakse za ove vrste pregleda. Upitnik se sastojao od tri oblasti, a svaka je sadržavala po nekoliko pitanja. Prva oblast je sadržavala demografske podatke ispitanika i ukupno je bilo pet pitanja u ovom dijelu. Druga oblast se odnosila na zdravstvene navike ispitanika i brojala je 15 pitanja. Treća oblast se odnosila na utvrđeno stanje oralnog zdravlja i sadržavala je tri nalaza i to jedan nalaz ukupnog broja prisutnih zuba, posebno mliječnih, a posebno stalnih i od tog broja broj karijesnih mliječnih i stalnih zuba, drugi nalaz se odnosio na prisutnost gingivita, a treći na prisutnost ortodontskih anomalija. Pregled je izvršen prema metodologiji i kriterijima SZO-a, služeći se stomatološkim zrcalima, standardnim parodontnim sondama CPITN, te prirodnim svjetlom. Parametri korišteni za procjenu statusa oralnog zdravlja bili su indeksi: DMFT i SiC, ima li pečatnih materijala, mjesni parodontni indeks i indeks razvojnih defekata u caklini (RDC).

Istraživanje je provedeno na području primorskog dijela Crne Gore, u gradovima: Herceg Novi, Kotor, Tivat, Budva, Bar i Ulcinj tijekom lipnja 2005. godine. U svakom je gradu ispitano oko 2% učenika, pri čemu je broj učenika iz uzorka istraživanja u svakom od ispitivanih gradova prikazan na tablici 1. Polazeći od pretpostavke da je osnovna veličina uzorka zastupljena u svakoj općini sa približno

disease as well as that one risk factor can simultaneously affect more than one disease¹².

It is obvious that preventive measures for mouth and teeth diseases should be directed to all risk factors: balanced diet, regular mouth and teeth hygiene, combined application of fluoride and other preparations as well as regular dental check-ups at least once in six months in order to diagnose and treat dental problems on time so that more serious problems could be prevented¹³.

Material and method

The research was designed as a cross-sectional study using interview method adapted for epidemiological field research. Survey interview was used as a research instrument as well as the dental examination of mouth and teeth in order to obtain oral health data for the examined children. Obtained interview responses were correlated with data obtained from investigation of health condition of teeth and mouth using the protocol of good medical practice for this kind of examinations. The questionnaire consisted of three parts and each of them had several questions. The first part contained respondents' demographic data and there were five questions. The second part related to respondents' health habits and there were fifteen questions. The third part related to determined oral health condition and it contained three findings. The first finding gave data on total number of present teeth, number of deciduous and number of permanent teeth as well as the number of caries deciduous and permanent teeth. The second one gave data on occurrence of gingivitis and the third one the occurrence of orthodontic anomalies. The examination was carried out according to WHO methodology and criteria using dental mirrors, standard CPITN periodontal probe in daylight. Parameters used in assessment of condition of oral health were indexes: DMFT and SIC, whether there are teeth sealed material, periodontal index and index of developmental defects of dental enamel (RDC).

The research was carried out in the coastal region of Montenegro that is, in the municipalities of Herceg Novi, Kotor, Tivat, Budva, Bar and Ulcinj in June 2005. Approximately 2% of school children were examined in each municipality and number of school children in the

2% učenika, sa odgovarajućom stopom izbora, koristeći tablicu slučajnih brojeva, izvršen je izbor jedinica posmatranja. Jedinice analize predviđene su kao slučajno očekivane veličine, pa je zbog toga, realizacija uzorka od posebnog značaj za svaku jedinicu analize pojedinačno. Polazeći od činjenice da se navike formiraju u toku ranog djetinjstva i da se posljedice nedakvatnih higijenskih navika mogu uočiti u ranoj školskoj dobi ispitivanjem su obuhvaćena djeca od prvog do petog razreda osnovne škole, odnosno starosti od sedam do deset godina života (Tablica 2). Da bi se smanjili troškovi gubitka vremena, postavljen je i zahtjev za anketiranjem svih jedinica promatranja u izabranim školama u I etapi izbora i u okviru njih izabranih skupina - učenika. Ovo je istovremeno značilo opredjeljenje za primjenu dvoetapnoga stratificiranog uzorka kompaktnih skupina.

Na tablici 2 prikazana je struktura ispitanika s obzirom na spol i starost.

Pored brojčanih metoda, u analizi rezultata ove studije korištene su i grafičke metode analize i to:

- stepenasti grafikoni, horizontalni i vertikalni za usporedno prikazivanje stanja i struktura obilježja u okviru i između pojedinih gradova,
- kružni grafikoni za prikazivanje strukture,
- kombinirani grafikoni za prikazivanje strukture onih jedinica analize koje imaju analiziranu karakteristiku,
- grafikoni za prikazivanje intervala pouzdanosti za vjerojatnost $p = 0.95$, pri čemu treba očekivati da će se kretati vrijednost u osnovnom skupu, na osnovu dobivenih vrijednosti iz uzorka.

Tablica 1: Broj učenika i broj ispitanika po gradovima

Grad	Broj učenika	Broj ispitanika
Bar	4877	98
Budva	1903	38
Kotor	2699	54
Tivat	1650	33
Ulcinj	2439	49
Herceg Novi	3378	68
Ukupno	16946	340

sample in each municipality is given in table 1. Assuming that the sample for each municipality is approximately 2% of school children, with corresponding selection rate and using the table of random numbers, the selection of the observation units was made. Analytical units were foreseen as random expected values so that the sample realization was very important for each analytical unit. Since habits are formed in the early childhood and that the consequences of inadequate hygiene habits can be detected in early years of schooling the subjects of investigation were children from first to fifth grade of the elementary school i.e. seven to ten years of age (Table 2). In order to be more time efficient all examination units were surveyed in chosen schools in the first phase and among them chosen classes - groups of students. This meant that two phase stratified sample of compact groups was used.

Table 2 shows the distribution of the respondents according to sex and age.

Apart from numerical methods, the following graphical methods were also used for data analysis:

- vertical and horizontal bar graphs for parallel data presentation in and among the municipalities,
- pie graphs for presentation of structure
- combined graphs for presentation of structure of those analytical units where the analyzed characteristic is present
- graphs for presentation of confidence interval for probability $p=0.95$ in which the value for the population can be expected to be distributed based on data obtained from the sample.

Table 1: Number of school children and number of respondents in municipalities

Municipality	Number of school children	Number of respondents
Bar	4877	98
Budva	1903	38
Kotor	2699	54
Tivat	1650	33
Ulcinj	2439	49
Herceg Novi	3378	68
Total	16946	340

Tablica 2: Struktura ispitanika s obzirom na starost i spol

Starost 7 godina		Starost 8 godina		Starost 9 godina		Starost 10 godina	
Dječaka	Djevojčica	Dječaka	Djevojčica	Dječaka	Djevojčica	Dječaka	Djevojčica
43	44	43	40	44	42	41	43
Ukupno 87 učenika		Ukupno 83 učenika		Ukupno 86 učenika		Ukupno 84 učenika	

Tabel 2: Distribution of respondents according to sex and age

7 years of age		8 years of age		9 years of age		10 years of age	
Male	female	male	female	male	female	male	female
38	39	39	36	41	42	40	43
Total 77		Total 75		Total 83		Total 83	

Rezultati

Dobiveni rezultati pokazuju:

- dase prisutstvo gingivitisa kod anketiranih učenika kreće od 36,7% ± 4,9% u Baru do 58,8% ± 6,0% u Ulcinju,
- da postoji statistički visoko značajna razlika ($p < 0,01$) u prisutnosti gingivitisa između anketiranih učenika iz Ulcinja i Bara (Grafikon 1).

Ispitivanjem stanja oralnog zdravlja s aspekta prisutnosti ostvarenog rizika za pojavu ortodontskih anomalija, dobiveni rezultati pokazuju:

- da se prisutstvo ortodontskih anomalija kod anketiranih učenika kreće od 48,0% ± 7,1% u Herceg Novom do 63,0% ± 6,6% u Tivtu,
- da ne postoji statistički značajna razlika između promatranih područja u zastupljenosti ortodontskih anomalija, $p > 0,05$ (Grafikon 2).

Navike u području oralne higijene mjerene su dvama stupnjevima slaganja s ponuđenim razlozima - tvrdnjama, a mogući odgovori bili su potvrdni ili niječni.

Rezultati su pokazali da se potvrdni odgovori kreću od 13,2% ± 4,11% u Ulcinju do 63,3% ± 4,9% u Baru (Grafikon 3).

Učenici su testirani vezano uz posjedovanje pribora za oralnu higijenu, a mogući su odgovori bili potvrdni ili odrični.

Rezultati pokazuju da se potvrdni odgovori na pitanje: *Imaš li svoj pribor za oralnu higijenu?*, kreću od 76,5% u Ulcinju do 100% u Baru (Grafikon 4).

Results

The obtained results showed:

- the occurrence of gingivitis in surveyed school children was in the range from 36.7%±4.9% in Bar to 58.8%±6.0% in Ulcinj
- ∴ there is a statistically significant difference ($p < 0.01$) in regard to occurrence of gingivitis between surveyed school children from Ulcinj and Bar (Graph 1).

Investigating the condition of oral health in relation to presence of realized risk for occurrence of orthodontic anomalies the obtained results showed that:

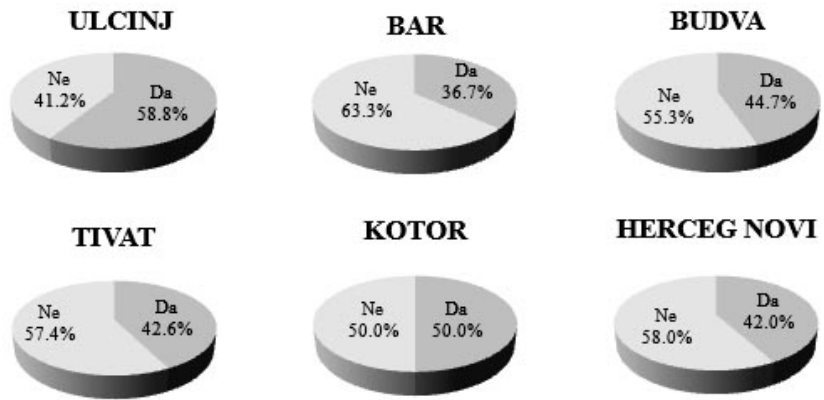
- the occurrence of orthodontic anomalies in surveyed school children was in the range from 48.0%±7.1% in Herceg Novi to 63.0%±6.6% in Tivat,
- there is no statistically significant difference in regard to occurrence of orthodontic anomalies among the municipalities, ($p > 0.05$) (Graph 2).

Oral hygiene habits were examined using two-point scale to rate the agreement with the statements and possible replies were affirmative or negative.

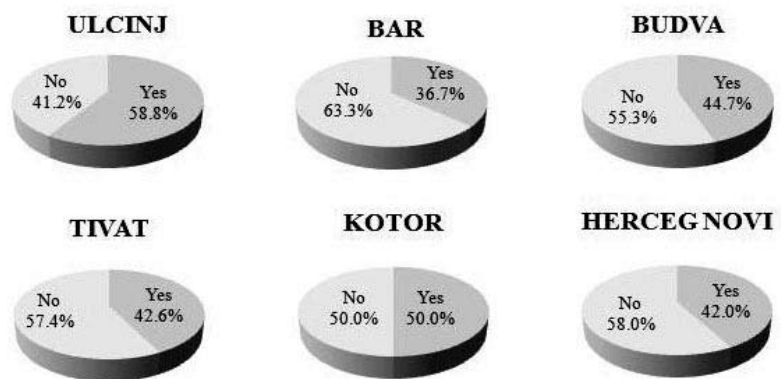
The obtained results showed that affirmative replies were in the range from 13.2%±4.11% in Ulcinj to 63.3%±4.9% in Bar (Graph 3).

School children were also surveyed about their possession of tooth hygiene set and possible replies were affirmative or negative.

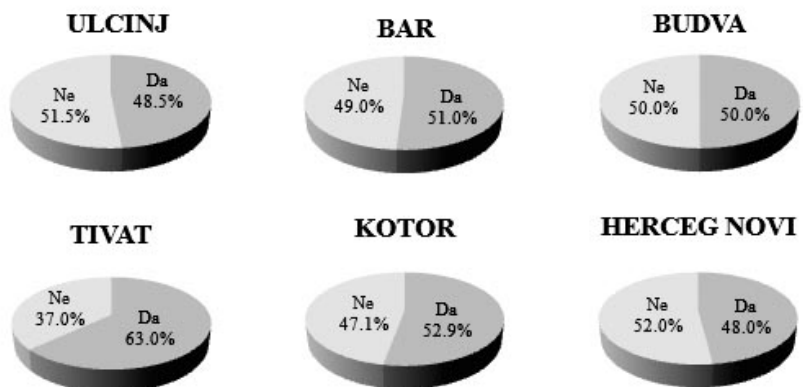
The obtained results showed that the affirmative replies to the question : Do you have your own tooth hygiene set? were in the range



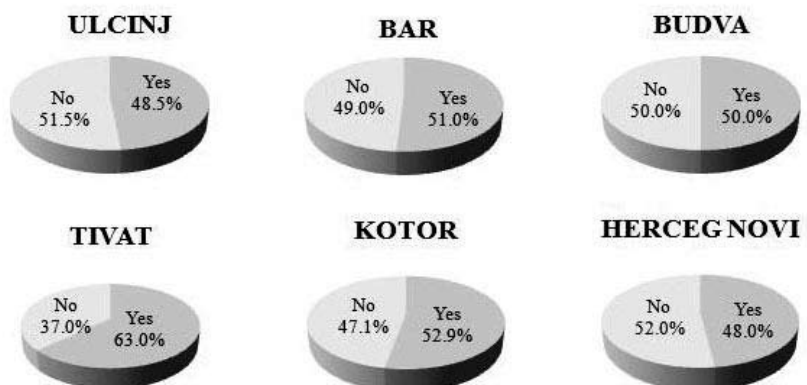
Grafikon 1: Prisutstvo gingivitisa kod ispitanika



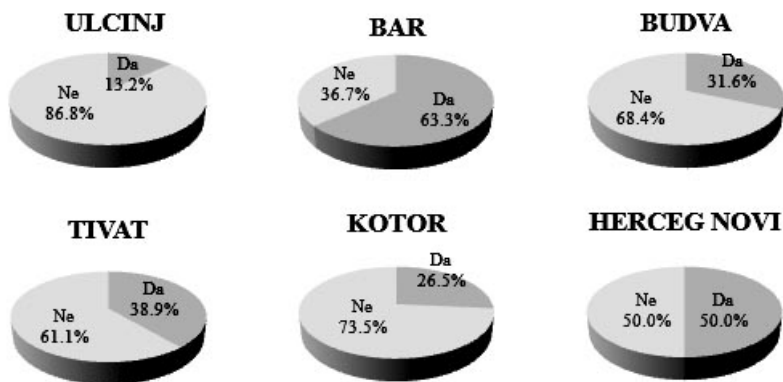
Graph 1: Occurrence of gingivitis in respondents



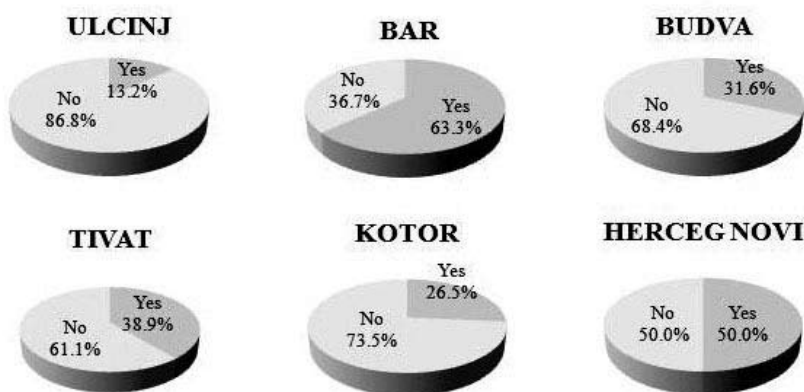
Grafikon 2: Stanje oralnog zdravlja s aspekta prisutstva ostvarenog rizika za pojavu ortodontskih anomalija



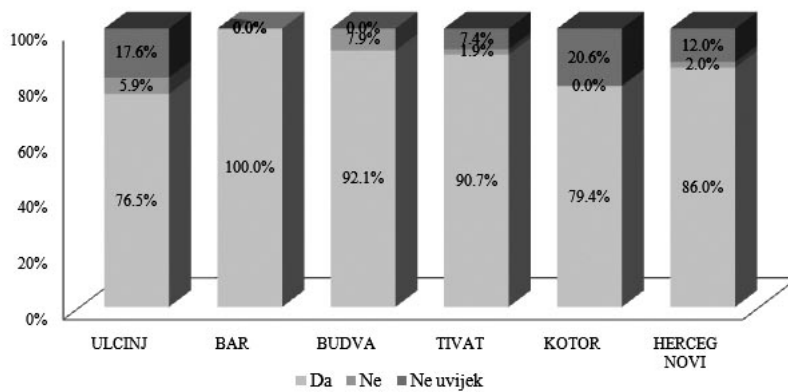
Graph 2: Condition of oral health in regard to occurrence of realized risk for orthodontic anomalies



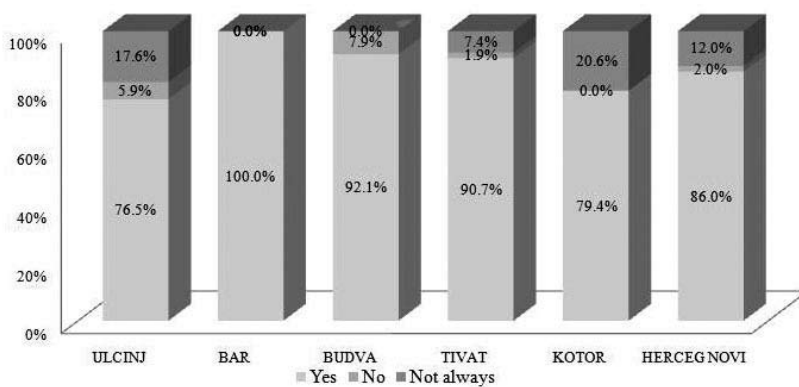
Grafikon 3: Higijenske oralne navike ispitanika



Graph 3: Oral hygiene habits of respondents



Grafikon 4: Posjedovanje pribora za oralnu higijenu



Graph 4: Possession of tooth hygiene set

Dobiveni rezultati vezani uz ponašanje učenika u odnosu na konzumiranje slatkiša pokazuju:

- da se potvrdni odgovori na tvrdnju *Ne jedem često slatkiše* kreću od $52,0\% \pm 7,1\%$ u Herceg Novom do $71,1\% \pm 7,4$ u Budvi,
- da postoji statistički značajna razlika ($p < 0,05$) u potvrdnim odgovorima učenika Ulcinja i Kotora, kao i učenika Ulcinja i Herceg Novog (Grafikon 5).

Dobiveni rezultati u vezi ponašanja učenika u odnosu na redovit odlazak na kontrolu pokazuju:

- da se potvrdni odgovori na tvrdnju *Idem redovito na kontrolu* kreću od $10,3\% \pm 3,7\%$ u Ulcinju do $46,0\% \pm 7,0\%$ u Herceg Novom,
- da postoji statistički vrlo značajna razlika ($p < 0,001$) u potvrdnim odgovorima između učenika Ulcinja u odnosu na učenike iz Bara, Tivta i Herceg Novog (Grafikon 6).

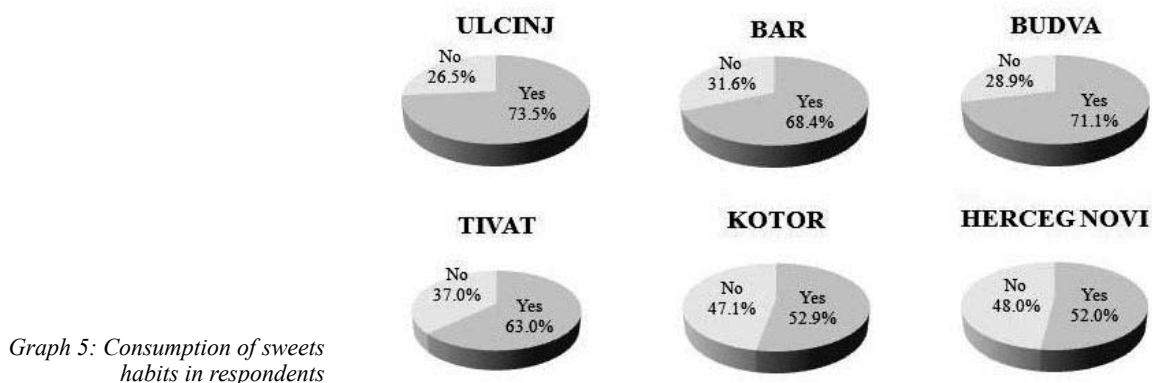
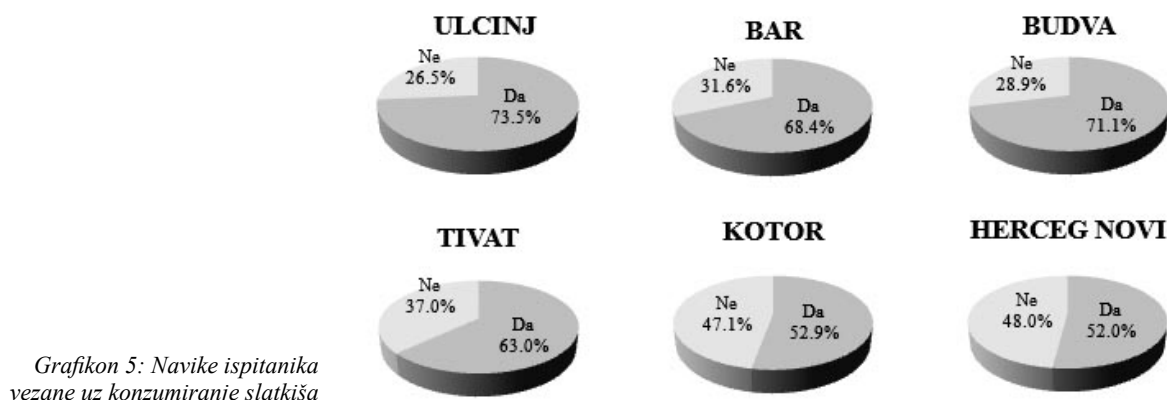
from 76.5% in Ulcinj to 100% in Bar (Graph 4).

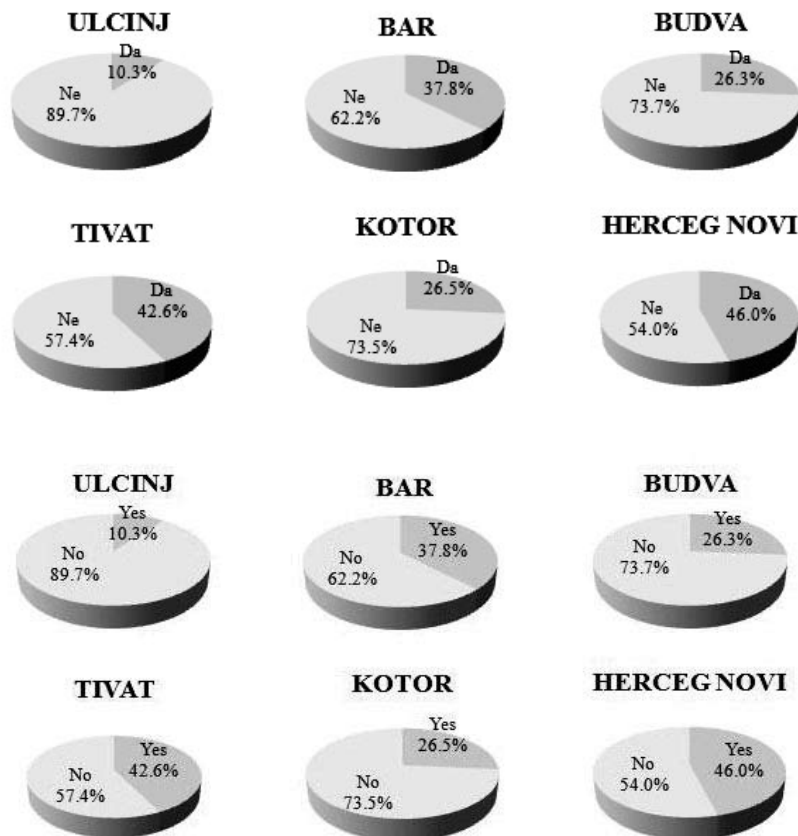
The obtained results regarding the consumption of sweets showed that:

- affirmative replies to the statement “ I do not often eat sweets” were in the range from $52.0\% \pm 7.1\%$ in Herceg Novi to $71.1\% \pm 7.4\%$ in Budva.
- there is statistically significant difference ($p < 0.05$) in regard to affirmative replies of school children from Ulcinj i Kotor as well as those from Ulcinj i Herceg Novi (Graph 5).

The obtained results regarding the regular dental check-up showed that

- affirmative replies to statement “ I have regular dental check-ups” were in the range from $10.3\% \pm 3.7\%$ in Ulcinj to $46.0\% \pm 7.0\%$ in Herceg Novi there is statistically significant difference ($p < 0.01$) in regard to affirmative replies of school children from Ulcinj to those from Bar, Tivat and Herceg Novi (Graph 6).





Grafikon 6: Navika kontrole zdravlja usta i zuba

Graph 6: Regular dental check-ups in respondents

Rasprava

Studija koja je rađena u osnovnim školama na području primorskog dijela Crne Gore, pokazala je da učenici u cjelini nemaju formiranu naviku održavanja oralne higijene. Više od polovice anketiranih učenika izjavilo je da svoje zube ne pere svaki dan, a za one učenike koji to ipak čine jesu „razlozi čistoće i zdravlja, ali i razlozi prisile“, jer ih roditelji kontroliraju.

Rezultati istraživanja pokazali su da u pojedinim ispitivanim sredinama više od polovice ispitanika imaju gingivitis, pri čemu se jasno uočava značajna razlika između gradova u kojima je izvršeno ispitivanje. Usporedbom ovih podataka s podacima redovite navike održavanja oralne higijene, pokazuje se postojanje visokog stupnja suglasnosti, što je u skladu s dosadašnjim istraživanjima o direktnoj povezanosti gingivitisa i redovnih navika održavanja oralne higijene¹⁴. Uočeno je da u gradovima u kojima je pregledom dijagnosticirano postojanje gingivitisa kod najmanjeg broja učenika, istovremeno je najčešće odgovarano da se redovito održava

Discussion

The study that was carried out in elementary schools in coastal region of Montenegro showed that school children do not have formed oral hygiene habits. More than half of respondents stated that they did not brush their teeth every day and those who brushed their teeth did that for the sake of cleanness and health but also because they were forced to do that because their parents control them.

The results showed that in some of the municipalities more than half of respondents have gingivitis and there is a significant difference among municipalities. If these data are compared with data on regular oral hygiene habit there is a high degree of agreement what is in accordance with the research so far on direct correlation between gingivitis and regular oral hygiene¹⁴. It can be noted that in municipalities where the gingivitis was diagnosed in the smallest number of school children, the respondents replied most frequently that they practiced regular oral hygiene and that all respondents had

higijena usta i zuba, pri čemu svi ispitanici posjeduju adekvatan pribor. Ovim se ukazuje na značaj zdravstveno-odgojnog djelovanja u prevenciji oboljenja usta i zuba¹⁵.

Nažalost, kod nas još ne postoji dovoljno razvijena svijest o važnosti oralnog zdravlja za cjelokupno zdravlje pojedinca, a još manje o važnosti provođenja oralne higijene¹⁶. Zanimljiv je podatak da više od tri četvrtine ispitanika iz Ulcinja imaju pribor za održavanje higijena usta i zuba, ali samo gotovo jedan od deset ga koristi i redovito održava higijenu usta i zuba. Slična je situacija i u ostalim zemljama regije. Studija provedena u Hrvatskoj 2003. godine pokazuje da samo 10,57% djece u dobi od 11-14 godina, pere zube više puta dnevno, 44,05% povremeno, 44,93% rijetko, a 0,44% nikada [14]. Stoga ne čudi podatak da KEP indeks za ispitivanu skupinu iznosi 6,7. U većini europskih zemalja taj je broj ispod 3, u većini zemalja EU-a kreće se između 0,5 i 1,5. Za prikaz, u Hrvatskoj je 1991. godine iznosio 2,6, a 1999. godine 3,5. Novo istraživanje rađeno u Hrvatskoj pokazuje da srednja vrijednost KEP-indeksa na ispitivanom uzorku pacijenata za trajne zube iznosi 9,53, a za populaciju šestogodišnjaka i dvanaestogodišnjaka 2,0¹⁷.

Naime, ponašanje djece direktno je povezano s procesom socijalizacije te je neophodno definirati adekvatne mjere u cilju modifikacije ponašanja¹⁸. Podaci pokazuju da postoji razlika u stavu u vezi s redovitom kontrolom zdravlja usta i zuba, što je u odnosu sa socijalno-obrazovnom strukturom njihovih obitelji. Stav da se redovitom preventivnom kontrolom mogu spriječiti oralna oboljenja, očigledno nije prisutan kao životna praksa obitelji iz kojih dolaze ispitivana djeca. Iako se s oralnom higijenom djeca vrlo rano susreću, iako su danas roditelji sve više svjesni važnosti oralnog zdravlja za cjelokupnu dobrobit svoje djece, uloga roditelja i djece u održavanju zdravlja usne šupljine često nije dovoljna, pa je nužno potražiti pomoć stomatologa. Kako bi se izbjegli ozbiljniji kvarovi i teže posljedice, stomatologa je najbolje posjećivati preventivno, čak i onda kada je sa zubima sve u redu¹⁹.

Istraživanja rađena u svijetu su pokazala da postoji značajna povezanost između oboljenja usta i zuba i redovitog konzumiranja slatkiša. Naime, kod ispitanika kod kojih je identificirano češće prisustvo gingivitisa, ustanovljeno neredovito održavanje higijene usta i zuba, ne-

adequate tooth hygiene set. This emphasises the importance of health education in prevention of mouth and teeth diseases¹⁵.

Unfortunately the awareness of the importance of oral health for health of an individual is not at adequate level. It is even less adequate for the importance of practising good oral hygiene¹⁶. It should be noted that more than three quarters of respondents from Ulcinj have tooth hygiene set but only one in ten brush their teeth regularly. Similar situation is in other countries in the region. The research carried out in Croatia in 2003 showed that only 10.57% of children 11 to 14 years of age brush their teeth several times a day, 44.05% from time to time, 44.93% rarely and 0.44% never [14]. It is not surprising that DMFT index for examined children is 6.7. In most European countries it is below 3 and in most EU countries is the range from 0.5 to 1.5. In Croatia it was 2.6 in 1991 and 3.5 in 1999. A recent research carried out in Croatia showed that average DMFT index for permanent teeth was 9.53 and for six and twelve year olds 2.0¹⁷.

Children behaviour is directly related to socialization process so it is necessary to define the adequate measures in order to modify that behaviour¹⁸. Data show that there is a difference in attitude regarding regular dental check-up and it is in correlation with socio-educational characteristics of their families. The attitude that regular dental check-up can prevent oral diseases obviously is not present in everyday practice in families of the surveyed children. Although children became familiar with oral hygiene at early age and although parents are more and more aware of the importance of oral health for the health of their children, the role of parents and their children in keeping oral cavity healthy is not sufficient so it is necessary to ask for help from a dentist. In order to prevent more serious dental problems and consequences preventive visits to dentist should be made even when the teeth are healthy¹⁹.

Research also showed the significant correlation between mouth and teeth diseases and regular consumption of sweets. Those respondents with more frequent occurrence of gingivitis also do not practice regular hygiene of mouth and teeth, do not have regular dental check-ups

redovito kontroliranje ovih organa kod stomatologa, ustanovljeno je i češće prisustvo navike konzumiranja slatkiša, a sljedstveno tome i pojava oboljenja zuba²⁰.

Rezultati ove studije pokazuju da 91% dvanaestogodišnjaka ima jedan ili više karijesa, broj osoba s karijesom ubrzo dostiže maksimalne vrijednosti (u 15. godini 97%, u 18. godini 98% itd.); stanje još bliže oslikava podatak da svaka osoba u prosjeku godišnje dobije gotovo po jedan oboljeli zub više (KIP u 12. godini iznosi 4,4; u 15. godini je 8,25 a u 18. godini 10,9). Ovi se podaci značajno razlikuju od podataka u zemljama razvijenog Zapada²¹. Međutim značajno se poklapaju sa podacima koji su dobiveni kod adolescenta u Istočnoj Bosni, i pokazalo se da djeca ovog uzrasta imaju veliki broj oboljelih i nepopravljenih zuba²². Studija rađena u Banja Luci 2008. godine na dvanaestogodišnjacima pokazuje visoke vrijednosti KIP-a, osobito u ruralnoj populaciji učenika (4,89 i 6,74). Podaci iz ankete pokazuju statistički značajnu razliku u odgovorima vezanim za posjete stomatolozima, fluorprofilaksu, učestalost pranja zuba i uzrast kada je započeto s održavanjem oralne higijene²³.

Istraživanje je pokazalo da Crna Gora pripada grupi visokorizičnih zemalja²⁴. Poređenjem sa ostalim zemljama pokazuju vrijednosti za istu populacijsku skupinu u rasponu od 3,24 u Meksiku²⁵, 2,4 na Filipinima²⁶, 1,07 u Španjolskoj²⁷, do najniže vrijednosti od 0,65 iz Nikaragve²⁸.

Zaključak

Studija je pokazala da se broj karijesnih mliječnih zuba kreće od 2 do 8, dok broj prisutnih karijesnih stalnih zuba iznosi od 1 do 4 po jednom djetetu prvog razreda; uzrastom djece raste broj karijesnih stalnih zuba, pri čemu postoji visoka statistički značajna razlika u prosječnom broju karijesnih zuba između pojedinih gradova ispitanog područja. U skladu s time navedeni su i podaci o rizičnim faktorima, jer učenici pokazuju afinitet za često uzimanje slatkiša u međuobrocima, a pri tome zube peru „rijetko“ ili „nikako“. Odlazak na redovitu kontrolu kod stomatologa zastupljen je od jedne petine do više od jedne polovice anketiranih učenika. Odlazak kod stomatologa na preventivnu kontrolu zastupljen je samo kod jedne petine anketiranih učenika.

and more often consume sweets and as a result of that occurrence of dental diseases²⁰.

The results of the study showed that 91% of twelve-year olds have one or more teeth with caries and number of individuals with caries very soon reaches its maximal values (97% at the age of 15 and 98% at the age of 18). The data that each person on average get one decayed tooth more each year illustrate the situation even better (mean decayed teeth value at the age of 12 is 4.4, at the age of 15 8.25 and at the age of 18 it is 10.9). These results are highly different from the results in developed western countries²¹. However similar results were obtained for adolescents in Eastern Bosnia showing that children of this age group had a great number of carious and unrestored teeth²². The study carried out in Banja Luka in 2008 on twelve-year olds showed high mean decayed teeth value especially in rural areas (4.89 and 6.74). Survey data showed that there was a statistically significant difference in replies in regard to dental visits, fluoride prophylaxis, frequency of teeth brushing and the age when practice of oral hygiene started²³.

The research showed that Montenegro belongs to a group of high-risk countries²⁴. Comparison with other countries showed the values for the same age group in the range from 3.24 in Mexico²⁵, 2.4 in the Philippines²⁶, 1.07 in Spain²⁷ to the lowest value 0.65 in Nicaragua²⁸.

Conclusion

The study showed that the number of carious deciduous teeth is in the range from 2 to 8, while the number of carious permanent teeth is in the range from 1 to 4 per a first grade child. The number of carious teeth increased with the age of children and there was a statistically significant difference in average number of carious teeth among the municipalities. Data on risk factors are presented also because children tend to consume sweets very often between meals but brush their teeth “rarely” or “never”. Regular dental check-ups were present in the range from one fifth to more than half of respondents. Preventive dental visits were present in only one fifth of respondents.

U odnosu na prisutstvo gingivitisa, uočeno je da je taj postotak mnogo veći u Ulcinju u odnosu na ostale primorske gradove.

Promatrano s aspekta rasprostranjenosti ortodontskih anomalija, utvrđeno je da ne postoji statistički značajna razlika između promatranih područja u rasprostranjenosti ortodontskih anomalija. U prosjeku, kod svakog drugog djeteta prisutna je neka ortodontska anomalija.

Razlozi ovakvog stanja oralnog statusa u određenoj mjeri su posljedica u cjelini prisutne niske razine zdravstvene kulture, gdje je zdravlje usta i zuba „sporedna“ briga kojoj se ne pridaje veći značaj, zatim neizgrađena jasna zdravstvena praksa obitelji, dakle sredine u kojoj djeca stječu prva znanja i navike, a koja, prema rezultatima provedenog istraživanja, nije dovoljna podrška djeci za usmjerenje ka zdravim navikama u odnosu na zdravlje usta i zuba.

It was noted that the percentage of occurrence of gingivitis was much more higher in Ulcinj than in other municipalities.

Regarding the prevalence of orthodontic anomalies it was determined that there was no statistically significant difference among the municipalities. Every second child had some kind of orthodontic anomalies.

It can be concluded that to a certain degree the oral health condition is the consequence of low level of health culture. The adequate attention is not paid to mouth and teeth health and health practice in the family where children acquire their first knowledge and habits is not clearly developed. That practice, according to the results of this study, does not provide sufficient support to children for formation of healthy habits regarding mouth and teeth health.

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