ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

Enfermedades gingivales en la población de 19 a 34 años

Gingival diseases in the population aged 19 to 34 years

[1] Maritza Madam O'Farrill https://orcid.org/0000-0002-9205-6970
MSc. Mayabeque School of Medical Sciences, Andrés Ortiz Junco Dental Clinic. Cuba
maritzamo@infomed.sld.cu

[2] Adainy Martinez Gonzalez https://orcid.org/...
Dr. Maya Beque Faculty of Medical Sciences, Andrés Ortiz Junco Dental Clinic. Cuba
Adainy9809@nauta.cu

[3] Indira Tejeda Ramos https://orcid.org/...
Dr. Mayabeque Faculty of Medical Sciences, Andrés Ortiz Junco Dental Clinic. Cuba
indiratejedaramos@gmail.com

[4] Luis Efrain Velastegui Lopez https://orcid.org/0000-0002-7353-5853
Digital Science Publishing House
luisefrainvelastegui@hotmail.com

Scientific and Technological Research Article
Sent: 15/01/2024
Revised: 02/16/2024
Accepted: 03/20/2024
Published: 04/20/2024
DOI: **https://doi.org/10.33262/anatomiadigital.v7i2.3002**

Please quote: O'Farrill, M.M., Martinez Gonzalez, A., Tejeda Ramos, I., & Velastegui Lopez, L.E. (2024). Gingival diseases in the population aged 19 to 34 years. Digital Anatomy, 7(2), 78-110.https://doi.org/10.33262/anatomiadigital.v7i2.3002

DIGITAL ANATOMY is an electronic, quarterly journal that will be published in electronic format and has the mission of contributing to the training of competent professionals with a humanistic and critical vision who are capable of presenting their investigative and scientific results to the same extent that positive changes in society are promoted through their intervention.https://anatomiadigital.org
The journal is published by Editorial Ciencia Digital (a prestigious publisher registered with the Ecuadorian Book Chamber with membership number 663).www.celibro.org.ec

Anatomía Digital

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

Palabras claves:
gingivitis, enfermedad gingival, 19 a 34 años, factor de riesgo

Resumen

Introducción: Se realizó un estudio observacional descriptivo de corte transversal de octubre del 2021 a noviembre 2023. **Objetivo**: caracterizar el comportamiento clínico-epidemiológico de la población de 19 a 34 años que presentan enfermedades gingivales. **Metodología** El universo estuvo constituido por el total de la población de dicho grupo de edad del Consultorio del Médico de la Familia No. 13 perteneciente al municipio de Batabanó, provincia Mayabeque, y se seleccionó una muestra de 40 pacientes mediante muestreo aleatorio simple. Se confeccionó una planilla de recolección de datos La información fue recogida en planilla recolectora de datos Planilla de recolección de datos (Anexo 1) la cual se llenó después de realizada el examen bucal a los pacientes en la clínica Estomatológica, utilizando luz artificial, con el instrumental de diagnóstico esterilizados (espejo, explorador bucal, pinza para algodón y uso de sonda periodontal) para descartar la presencia o no de bolsas periodontales. En dicha planilla quedaron plasmada de forma organizada todas las variables comprendidas en el estudio los fueron analizados y procesados de forma estadística, volcándose los resultados en tablas y gráficos. El análisis estadístico se realizó utilizando las tablas de contingencia a través de la dócima X^{2} y en los casos que se alcanzó diferencias significativas se aplicó la dócima de comparación Múltiple de Duncan: **Resultados**: El grupo de edades más frecuente resultó ser el de 29 a 34 años (40%) , el sexo femenino (57.5 %) , predominaron los pacientes con presencia de alguna bolsa periodontal valor 6 (27.5%) , de la población estudiada un 80% presenta una higiene bucal deficiente, el factor de riesgo que predomina es la mala higiene bucal con un 80%, y el nivel de conocimiento sobre los factores de riesgo es bajo con un 40%. **Conclusiones**: Predomino el grupo de edad de 29 a 34 años, el sexo femenino y la condición grado 6. La mayor parte de la población estudiada presenta una higiene bucal deficiente. El factor de riesgo que predomino fue la higiene bucal deficiente. La población estudiada presenta un bajo nivel de conocimiento. **Área de estudio general** Clínica Estomatológica Batabano **Área de estudio específico**: Consulta estomatológica Tipo de estudio: artículo original

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

Keywords:
gingivitis, gingival disease, 19 to 34 years, risk factor

Abstract

Introduction: A cross-sectional descriptive observational study was carried out from October 2021 to November 2023. Objective: to characterize the clinical-epidemiological behavior of the population aged 19 to 34 years who present with gingival diseases. Methodology The universe was made up of the total population of the mentioned age group of the Family Doctor's Office No. 13 belonging to the municipality of Batabanó, Mayabeque province, and a sample of 40 patients was selected through simple random sampling. A data collection form was created. The information was collected in a data collection form. data collection form (Annex 1) which was filled out after the oral examination was performed on the patients in the dental clinic, using artificial light, with sterilized diagnostic instruments (mirror, oral explorer, cotton tweezers and use of periodontal probe) to rule out the presence or absence of periodontal pockets. In this form, all the variables included in the study were captured in an organized manner, they were analyzed and processed statistically, turning the results into tables and graphs. The statistical analysis was carried out using the contingency tables through the X2 test and in cases where significant differences were reached, Duncan's Multiple Comparison Test was applied: Results: The most frequent age group turned out to be 29 to 34 years old (40%) , female (57.5%), patients with the presence of a periodontal pocket value 6 (27.5%) predominated, of the population studied a 80% have poor oral hygiene, the predominant risk factor is poor oral hygiene with 80%, and the level of knowledge about risk factors is low with 40%. Conclusions: The age group of 29 to 34 years, female sex and grade 6 condition predominated. Most of the population studied has poor oral hygiene. The predominant risk factor was poor oral hygiene. The population studied has a low level of knowledge. General study area Batabano Stomatological Clinic Specific study area: consultation Type of study: original article

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

Introduction

Stomatology is the branch of medical sciences that is dedicated not only to the study of teeth, but also to the set of tissues and organs surrounding them. It has been described that, within oral diseases, periodontal diseases occupy second place in the hierarchy of oral diseases, surpassed only by dental caries.1

Oral diseases are considered public health problems due to their high prevalence in all regions of the world.Periodontal disease appears to be the most common of the diseases found in the embalmed bodies of Egyptians from 4000 years ago. Much of the current knowledge about Egyptian medicine comes from the Ebers and Edwin Smith papyri. The Ebers papyri contain many references to gum disease. 2

Periodontal diseases have existed throughout history and from the 1950s onwards, the relationship between sociocultural level and periodontal disease began to be studied, and studies carried out in 1956 showed that the severity of the condition increases in the lower socioeconomic groups.3

The microbiota of the gingival sulcus and dental plaque are strongly related to the origin and subsequent development of gingivitis, which can evolve into periodontitis and be more destructive and chronic. 4

The gingiva is a fibromucosa formed by dense connective tissue with a covering of keratinized squamous epithelium that covers the alveolar processes and surrounds the teeth; it has a pale pink color and forms a seal around the tooth that protects the bone and supporting tissues. Gingivitis is the inflammation of the gum caused by bacteria located in the gingival margin and the most common cause is that induced by bacterial plaque (biofilm) of infectious origin. 5

Gingival inflammation is caused by the long-term effects of plaque deposits, called biophill, formed by various bacteria and sloughed cells, leukocytes and macrophages within a protein-polysaccharide matrix that constitutes a sealed nest within which bacteria exchange nutrients and genetic information under the effects of the host's defense mechanisms. 5

Gingival disease is considered the second most common oral disorder in terms of morbidity, affecting more than three-quarters of the population. Gingivitis is an inflammatory process that begins in early childhood, at approximately 5 years of age, with prevalence rates of 2 to 34% in 2-year-old children and 18 to 38% in 3-year-old children, and gradually increases until reaching its highest point in puberty.6

Periodontal diseases are among the most common ailments affecting adolescents and young adults. Gingivitis is the type of periodontal disease most frequently seen in young patients.7

Various studies estimate the magnitude of gingivitis in young people, ranging from 43 to 86%. 8 910 Some studies use indices that evaluate the general periodontal condition; however, they can be separated by obtaining prevalences based on gingivitis and periodontitis indicators. 11-14

The first clinical manifestations that appear from an early age are formed during adolescence, with gingivitis becoming a condition of a reversible chronic immunoinflammatory process of the protective periodontal tissues that has a high prevalence worldwide. 15

Generally, tissue inflammation is present in all forms of gum disease. Periodic periodontal examination is essential to assess the inflammatory response in relation to the level of oral hygiene and risk factors, making it essential to maintain periodontal health; the most common form of periodontal disease is chronic gingivitis, which is a real health problem.16,17

The prevalence and severity of periodontal disease varies depending on social and environmental factors, oral and general diseases, and particularly on the individual's oral hygiene status. The first signs of these diseases are usually evident after the second decade of life. 17

The etiology of periodontal disease is complex, involving both local and systemic factors. However, it is now certain that gingivitis and periodontitis are infections induced by biofilms made up of bacterial microorganisms that colonize the gingival sulcus, causing an immunoinflammatory response whose immunological components are responsible for most of the damage observed at the periodontal level. This entire process begins by affecting the protective periodontium in the form of chronic gingivitis. 18

Risk factors determine specific morbidity and mortality profiles in different communities as a result of their members sharing exposure to certain factors, according to the predominant causal explanatory scheme. Some publications point out that the microorganisms of the gingival sulcus microbiota and dental plaque (DBP) are among the risk factors most closely associated with the origin and subsequent evolution of periodontal disease. In the stomatological world, it is well known that DBP is strongly related to the origin and evolution of dental caries. According to our current conceptions, its influence on the pathogenic process of periodontal disease is controversial and questioned. 18

It all seems to have started in the 1960s, when Harold Löe, a prestigious European researcher based in the United States, carried out the following experiment: He selected a small group of students and asked them to abandon oral hygiene for approximately 15 days, which caused the accumulation of PDB on their teeth and gums. This accumulation of PDB "caused" the appearance of a redness in the marginal gingiva around almost all the teeth present, which he called "marginal gingivitis". After that time, he made the group resume their usual oral hygiene and observed that the redness disappeared within 24-48 hours, concluding that PDB was the cause of the gingivitis. He made no reference to the biocellular and biomolecular essence of the phenomenon observed clinically, nor to the presence of microorganisms in the gingival sulcus that have a closer relationship with the marginal gingiva. 18

The publication that arose from this experience was very attractive to dentists and periodontists of the time and quickly circulated throughout the world of periodontics, and has been with us to this day. The dissemination of the results of this experience has generated numerous confusions regarding the lack of differentiation of the role of the PDB and the gingival sulcus microbiota in the pathogenesis of dental caries and chronic immunoinflammatory gingivitis respectively. The failure to differentiate the true relationships between the PDB and the gingival sulcus microbiota, nor the role of each in the context of oral hygiene, reduces the problem of gingivitis to the presence of the PDB, and the solution to its elimination by tooth brushing. This observation had been made earlier by Green and Vermillon in their oral hygiene index, who approached the problem from the same reductionist perspective, reaching identical conclusions. 18

For the World Health Organization (WHO), periodontal disease represents a public health problem. It is well known that gingivitis is a type of disease present throughout the world and that it affects a large percentage of the population. Some studies have shown a prevalence of between 43-86% in young patients.19

WHO Expert Committee identifies it as one of the most common diseases of the human race. There are no countries or territories free of them, they affect both sexes indiscriminately, at any age, race, economic and social condition. Studies describe that more than 80% of the adult population has suffered from gingivitis, periodontitis or both.20-24

Modern periodontics focuses on gingival problems from a new perspective, that of the so-called risk factors for the onset and progression of the disease. Over the years, there has been talk about the role of direct factors as initiators of these diseases, and how systemic (indirect) factors have aggravated or modified the role of the former, opposing them with the host's defensive response. 25

It is important to treat gum disease early because it can develop into periodontitis, which is the main cause of tooth loss in adults. Consequently, the absence of dental organs affects the function of the stomatognathic system; in addition, it can be a risk factor for multiple local and systemic conditions.

The prevalence of gingivitis in developed countries is approximately 73% andMore than 50% of the population in Europe suffers from some form of periodontal disease; older adults are at risk of 70 to 80% of severity. 27

Epidemiological, clinical and histological studies indicate that there is an age-related tendency for the development of gingivitis.Thus, it has been reported that the severity of gingivitis is less extensive in children than in adults with similar amounts of bacterial plaque. Puberty appears to have important consequences on the composition of plaque. Hormonal changes between the prepubertal and pubertal periods facilitate changes in the subgingival microflora. 28

In Spain, after analyzing the oral health situation of children and adolescents in Navarra, it was reported that only 2 out of 10 schoolchildren have completely healthy gums, without bleeding or accumulated calculus between the teeth. In Cali, Colombia, 53% of children aged 5 to 13 years had this disease. Other studies show a prevalence of 32% in children aged 6 to 12 years in the Democratic Republic of Laos.

In Venezuela, due to the inadequate health services policy, where health promotion and disease prevention programs do not reach a national culture, added to the low level of knowledge about adequate dietary habits and risk factors that increase the presence of gingivitis, reports from national and regional studies confirm that periodontal alterations progress as age advances. In this regard, the study for the Comprehensive Planning of Dentistry reports that "periodontal health is seriously altered, 45% of the population between 7 and 14 years of age presents some sign of this pathology.

Industrialized countries show a lower prevalence of periodontal disease in women than in men, however, these differences tend to disappear and be contrary in underdeveloped countries, which indicates that it is the socioeconomic and cultural conditions in these cases that are determining these differences and not the sex. 29

The geographic distribution of the disease also shows a higher prevalence and severity in African and Latin American countries than when compared with populations in the United States, where socioeconomic conditions tend to better explain these differences. In Latin America, the living conditions of these people, poor access to dental services, and inadequate lifestyles must lead to high levels of disease.

Some studies29 estimate the magnitude of gingivitis in young people, between 43% and 86%, using indices that evaluate the general periodontal condition; however, they can be

separated by obtaining prevalences based on gingivitis and periodontitis indicators. Studies carried out in Mexico29 report a prevalence of 49.9% in the population aged 20 to 34 years. National oral health studies in Spain, Mexico, Colombia, Brazil, Argentina and Chile report a prevalence that ranges between 30 and 60%.30

Within the epidemiological profile of oral health in Mexico, published in 2018, it is established that there is a positive association between periodontal disease, bacterial plaque deposits and age, understood as the time of exposure to risk. 31

In Latin America, a 24.9% prevalence of EAR was found in male adolescents. A Brazilian study of 4,895 patients treated in a dental clinic showed that 3.3% suffered from oral aphthous ulcers, of which 47.2% suffered from EAR.32

Numerous studies carried out worldwide have shown the common nature and high prevalence of periodontal disease from childhood onwards. When showing the results of epidemiological studies carried out in Cuba and in capitalist countries, it must always be taken into account that in Cuba dental care is free and is accessible to the entire population without class distinction.

However, in countries with market economies, dentistry/stomatology has a commercial, elitist and lucrative character; it can only be accessed by people who have sufficient economic resources to pay its high price, that is, the poor and people who are below the poverty level do not have the right to receive dental care, for this reason they are not included in epidemiological studies. 32

In Cuba, data from the latest National Oral Health Survey reveal that at the age of 5, 10% of Cuban children are affected by periodontal disease. At 12 years of age, the number of those affected reaches 42%, while at the ages of 15 and 18, 44% and 48% are affected respectively. A general increase in the prevalence and severity of the disease with age is observed. 33

A study conducted in Cuba showed that the age group with the most EAR was 15 to 24 years old, with 51.3%.33

Other studies conducted in Cuba have shown that gingivitis affects approximately 80% of school-aged children, and more than 70% of the adult population has suffered from gingivitis, periodontitis, or both. 34

In Cuba, chronic gingivitis is the most common form of gum disease. It is almost always present in all its forms. It begins at an early age, starting at age five with the change of teeth. It continues until puberty, where it becomes more prevalent due to the hormonal changes of this stage. It then gradually decreases until approximately age 35, when there is an increase in the prevalence of destructive periodontal disease, becoming

the first cause of tooth loss. In general, its prevalence remains high throughout life, with figures of 90.1%. 27

In Cuban studies, the 65-year-old age group is the one with the highest prevalence of periodontitis, while gingivitis prevails in the 25-34-year-old group. The results of clinical studies reveal that the lesions produced by periodontal disease in the supporting structures of teeth in young adults are irreparable and that in old age it destroys a large part of the natural teeth, depriving many people of their teeth during old age, and 60 to 100% of elderly people with natural teeth need some form of periodontal treatment, so it is urgent to diagnose and treat them appropriately.35

Most children in the world show signs of gingivitis (bleeding gums), and among adults, periodontal disease is common in its early stages. Between 5% and 15% of most population groups suffer from severe periodontitis, which can lead to tooth loss. Santiago et al. in their study stated that in Cuba the prevalence of periodontitis is between 60 and 90% of the population and in the world it is 93.2%. 35

In recent years, it has become clear that periodontitis is related to other areas of medicine, and is the cause of the appearance of systemic diseases of great social interest, since the relationship between oral health and health in general is increasingly demonstrated every day.

The general comprehensive stomatologist is in charge of identifying the obvious signs of some degree of gingival inflammation in all patients during the oral examination, with an emphasis on diabetic patients or those with chronic diseases, as well as smokers in whom stained teeth, poor hygiene, irritated gums, stains and lesions in the oral mucosa can be found, making it the first line of prevention and treatment.

The high frequency of patients aged 19 to 34 years with gingival diseases subject to multiple risk factors who attend Comprehensive General Stomatology consultations in the Batabanó municipality, Mayabeque province.

Despite the scientific and technical advances achieved in the field of health, periodontal disease is a particularly important health problem today, being considered the second cause of consultation in dental services.

Due to the importance of gum diseases and taking into account that there are no studies on the subject in Batabanó, this study has been motivated to carry out this study, to determine the gum status and risk factors in a population group aged 19 to 34 years belonging to the municipality of Batabanó.

It is vitally important to periodically evaluate periodontal tissues as part of comprehensive dental care for the population and to emphasize the basic work group where they must carry out health education where the population is informed about issues such as risk factors, causes and consequences of gum diseases in order to avoid more complex disorders such as periodontitis, which require more painful, prolonged and at the same time more expensive treatments for the country.

Methodology

A descriptive, cross-sectional observational study was conducted with the objective of, to determine the gingival status and risk factors in a population group aged 19 to 34 years belonging to the municipality of BatabanóMayabeque Province nthe corresponding period between the month From October 2021 to November 2021, the universe is made up of the 432 patients aged 19 to 34 from Office No. 13The variables used were age, sex, oral hygiene, prevalence and severity of periodontal disease and risk factors.Each patient was called to the dental clinic and during this visit they were questioned to collect general and relevant data, as well as their medical history, which were recorded in a data collection form (Annex 2) prepared for such purposes, and the level of knowledge was obtained from the knowledge level survey prepared for the study (Annex 3). In addition, a clinical oral examination was performed to complete the data on oral diseases and the Russell Periodontal Index, Revised WHO Form (IP-R) (Annex 4). The Love Index (Annex 1) was also determined to evaluate brushing efficiency. A Pentium IV computer with Windows XP was used to process the information, the texts were processed with Microsoft Word 2013 and the tables and graphs were made with Microsoft Excel 2013.

The tables were presented in accordance with the objectives, to carry out a better analysis and discussion of the results obtained in the research.

The percentage was used as a summary measure for both qualitative and quantitative variables.

The results were presented in tables of absolute and relative frequencies.

The statistical analysis of the percentages was carried out using the contingency table through the X2 test (Steel and Torrie 1988).

In cases where significant differences were reached (P0.05, P0.01 or P0.001) Duncan's tenth was applied. The statistical software InfoStat (V1.0) (2001) was used for processing the information.

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

Results

When analyzing the percentage distribution of patients according to age and sex, no significant relationship was found between these factors. It was evident that the most frequent age group was 29 to 34 years with 40%, followed by 24 to 28 years with 35% and the lowest figures were those between 19 and 23 years with 25%, although without significant differences. Regarding sex, no significant differences were found between them, although the female sex predominated with 57.5% compared to the male sex, which was present with 42.5%.

These results coincide with those of another author74 in a study carried out in Mexico, which exposes the 20 to 29 age group with 2.3% of the population, although in a lower percentage, and differ from other research also by the same author38 where it is reported that the groups with the highest prevalence are from 30 to 35 years old with 25%. Regarding sex, the data coincide with the same author38 who in his results shows that women predominate with 72% while men reflect 28%.

According to the author's criteria, these results could be attributed to the fact that women, because they are more concerned about their aesthetics and oral health, go to the dentist more frequently than men. In addition, the presence of a greater number of women is favorable due to the role they play within the family, which helps to create, from an early age, behaviors, habits and customs that promote health, which must be fulfilled by the members of the family group. In addition, they play an important role in the correct maintenance of health, both general and oral.

In order to achieve health education in periodontics, the role of the family is recognized, if it is within it that the individual lives, grows and develops, and from which he or she assumes sociocultural behaviors.

Table 1 Presence and severity of gingivitis according to age.

Age groups (years)	Sex				Total	
	Female		Male			
	No	%	No	%	No	%
19-23	6	15.0	4	10.0	10	25.0
24-28	8	20.0	6	15.0	14	35.0
29-34	9	22.5	7	17.5	16	40.0
EE and Sign		±5.9 NS			±7.4 NS	
Total	23	57.5	17	42.5	40	100.0
EE and Sign		±7.9 NS				

Legend: NS: not significant P>0.05

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

As described in Table 1 inIn the population studied, 80% had poor oral hygiene, represented by 32 patients with highly significant differences. significant differences in the group with efficient oral hygiene with only 20%. Regarding age groups, the most affected age group was 29-34 years old, with no significant differences from the other two groups.

It coincides with the results obtained in the study carried out in Havana City 39 where it was found that 86.7% of affected patients had poor oral hygiene, other authors40 obtained 62.5% of those examined with poor oral hygiene, a result similar to that obtained in the study. A similar result was obtained in a study carried out in Holguín41 where gingivitis predominated in patients with poor oral hygiene.

Similar results were obtained by other authors 42,43 in that patients with poor hygiene presented some degree of periodontal disease, which shows that the presence of poor oral hygiene is common in patients with periodontal disease.

It is the author's opinion that this association between poor oral hygiene and periodontal disease is due to the accumulation of bacteria caused by poor oral cavity cleaning, which initiates and aggravates periodontal disease, when the irritating factor is not eliminated. Poor oral hygiene continues to be a crucial element in the onset and progression of periodontal disease. Today, the greatest risk is attributed to the microbial metabolism of dental plaque and the microbiota of the gingival sulcus, and in turn this condition is the result of an incorrect oral hygiene habit. Efficient oral hygiene is the key to success.

Table 2.*Presence and severity of gingivitis by sex. Guines.2021*

Age groups (years)	Oral Hygiene				Total	
	Efficient		Deficient			
	No	%	No	%	No	%
19-23	3	7.5	7	17.5	10	25.0
24-28	2	5.0	12	30.0	14	35.0
29-34	3	7.5	13	32.5	16	40.0
EE and Sign		±5.9 NS				±7.4 NS
Total	8	20.0 b	32	80.0 to	40	100
EE and Sign		±7.9 ***				

Legend: NS: not significant: P>0.05

NS P>0.05

As evidenced in Table 2,When analyzing the severity of the disease, a predominance of the value 6 was observed with 11 patients for 27.5%, the values 1, 2 and 8 showed 8 patients in each one of them for 20% and with the lowest figures are the value 0 with 5 patients for 12.5% without significant differences between them. The group that shows

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

greater affectation in grade 8 (mobility, pathological migration and loss of function) is the 29 to 34 year old group with 4 affected patients. There was a predominance of 11 affected patients with grade 6 (presence of periodontal pocket) and 5 patients did not present signs of periodontal inflammation.

In this study, it was found that 27 patients suffered from gingivitis in its different stages, representing 67.5%, while 8 patients suffered from periodontitis, representing 20%. The data found in this research confirm that periodontal disease in individuals aged 19-34 is prevalent, however, it should be noted that the majority are in the earlier stages of periodontal disease.

In a study carried out in 2018, 44 found that gingivitis was the most frequent in their sample (41.7%), coinciding with the results of the research, although in a lower percentage. A similar result was obtained in a study carried out in Holguín 45,46.

Regarding the periodontal health status, the results are related to the studies carried out in Cuba 47 that suggest a high prevalence of periodontal disease for these ages, such as the values obtained in the research carried out in 2018 48. Regarding severity, the majority of studies report that gingivitis predominates, which coincides with the results obtained in the research.

Another study carried out in Cuba49 revealed that 55.8% of the subjects surveyed had gingivitis with pockets and cases of tooth mobility, classified according to the Russell index in categories 6 and 8, results that differ from those obtained in the present study.

In the author's opinion, these results could be attributed to the fact that gingivitis with advanced pockets was more frequent in the study because it is a population that is partly still studying and the other part is a worker, who attends our primary care service when they have symptoms. Despite being an urban population with an easily accessible service, we must insist on community activities to achieve regular attendance at our consultations.

It is important that this information be taken into account by the sectors involved in oral health, and even more so by those who direct public health policies so that they incorporate the detection and prevention of periodontal disease into the guidelines at the first level of care. Early detection is important to avoid severe stages that would have an impact on the economic level and on the quality of life of patients.

Table 3:*Prevalence and severity of periodontal disease and age groups. Year 2023*

Severity of periodontal disease	Age groups (years)						Total	
	19-23		24-28		29-34			
	No	%	No	%	No	%	No	%

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

Value 0	2	5.0	2	5.0	1	2.5	5	12.5
Value 1	3	7.5	2	5.0	3	7.5	8	20.0
Value 2	2	5.0	4	10.0	2	5.0	8	20.0
Value 6	2	5.0	3	7.5	6	15.0	11	27.5
Value 8	1	2.5	3	7.5	4	10.0	8	20.0
EE and Sign			±3.9 NS				±6.3 NS	
Total	10	25.0	14	35.0	16	40.0	40	100.0
EE and Sign			±7.4 NS					

Legend: NS: not significant: P>0.05

Table 3 shows that for the risk factor of missing but unrestored teeth, significant differences were found, showing that the most frequent age group was 29-34 years, followed by the 24-28 age group.

The table shows that the predominant risk factor is poor oral hygiene with 32 patients for 80%, followed by lost teeth not replaced for 67.5% and the least affected is diabetes mellitus with 6 patients for 15%. It can be seen that of the 35 patients affected by periodontal disease, 32 maintain poor oral hygiene.

In a study carried out in Sancti Spíritus 49 in 2020, it was found that 54.7% had poor oral hygiene, a result similar to ours where 80% was obtained.

According to a group of Cuban authors 50, smoking is one of the risk factors most frequently associated with the development of inflammatory periodontal disease and has a significant influence on the course, prognosis and severity of periodontal disease. These results are similar to those obtained in the present study, since smoking is one of the main risk factors present in the population studied.

When analyzing the severity of periodontal disease in patients with diabetes mellitus, a study conducted in 2019 51,52 found similar results, finding that 41% and 35.3% respectively of diabetic patients had advanced destruction. These results coincided with those obtained in the present investigation despite the fact that the data are older.

According to the author, oral hygiene is a crucial element in the onset and progression of periodontal disease. Today, the greatest risk is attributed to the microbial metabolism of dental plaque and the microbiota of the gingival sulcus, and this condition is in turn the result of an incorrect oral hygiene habit. Smoking at different intensities is one of the risk factors that most affects periodontal disease. The oral cavity is the first contact that the smoker has with tobacco, a substance that to a greater or lesser degree causes changes or alterations in soft and hard tissues.

Table 4: risk factors for periodontal diseases present. Year 2023.

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

Risk factors	Age Groups (years)						EE and Sign	Total	
	19-23		24-28		29-34			No	%
	No	%	No	%	No	%			
Poor oral hygiene	7	17.5	10	25.0	15	37.5	±7.0 NS	32	80.0 to
Smoking	7	17.5	6	15.0	5	15.5	±5.6 NS	18	45.0 b
Diabetes mellitus	1	2.5	3	7.5	2	5.0	±3.4 NS	6	15.0 c
Stress	3	7.5	4	10.0	8	20.0	±5.2 NS	15	37.5 b
Lost teeth not replaced	4	10.0 c	9	22.5 b	14	35.0 to	±6.6 *	27	67.5 a
Injurious habits (biting objects, cheilophagia onychophagia	2	5.0	4	10.0	6	15.0	±4.7 NS	12	30.0 b
							EE and Sign	±7.9 ***	

Legend: NS: not significant: P>0.05

*: significant: P<0.05

***: significant: P<0.001

The level of knowledge that predominates in the study population about the risk factors for periodontal disease is low with 16 patients for 40% and 11 patients have a high level of knowledge for 27.5%.

In a study conducted in 2018 53concludes that the degree of knowledge about periodontal disease in young adults was average, a result that differs from those obtained in the present study.

Study conducted in Matanzas, Cuba[54]determined that the level of knowledge about gingival and periodontal diseases in patients aged 20 to 40 years is poor with 65.5%, a result that coincides with the present study, although with a higher percentage.

According to the author, the population has little knowledge about the risk factors for gum disease, which may be due to the fact that they have received less information on this topic compared to others such as dental caries.The population must be educated taking into account the most common diseases; caries and periodontal disease, and their main causes are dental plaque, a product of poor oral hygiene, as well as various risk factors. For this reason, educational activities must be aimed at promoting changes in lifestyles and attitudes such as the importance of effective tooth brushing and the use of dental floss.

Chart 1: Percentage distribution of patients according to level of knowledge of risk factors for gum disease. Batabanó Municipality. Year 2023

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

Source: Table 1

Conclusions

- The age group of 29 to 34 years was the largest in the study, with a predominance of the female sex.
- Most of the population studied has poor oral hygiene, with a brushing efficiency index greater than 20.
- The grade 6 condition gingivitis with periodontal pocket formation predominated in the individuals examined, with the age group from 29 to 34 years being the most affected in grade 8 (mobility, pathological migration and loss of function).
- The predominant risk factors for periodontal disease were poor oral hygiene and missing but unreplaced teeth.
- The population studied has a low level of knowledge about the risk factors for periodontal disease.

Conflict of interest

The authors declare that there is no conflict of interest.

Bibliographic references

1. Ministry of Health. Epidemiological profile of oral health in Mexico 2018. Mexico: General Directorate of Epidemiology; 2018.

2. Carranza FA. Glickman's Clinical Periodontology. Havana City: People and Education; 2018.

3. Paz Latorge EI. Periodontal risk factors 2018. http://www.monografias[accessed: 2020].

4. Pulido Rozo M, González Martínez F, Rivas Muñoz F. Periodontal disease and oral hygiene indicators in high school students Cartagena, Colombia. Rev salud pública [Internet]. 2017 [cited 12 Sep 2021];13(5): 844-52. Available at:http://www.scielo.org.co/scielo.php?script=sci_arttext&pid=S0124-00642011000500013&lng=en

5. Fernández-Corrales Y, Calzado-Salomón R, Cabrera-Zamora S, Martínez-Suárez H. Efficacy and safety of Salvia officinalis L tincture in the treatment of chronic edematous gingivitis. MULTIMED [Internet]. 2017 [cited 10 Apr 2020]; 20(5). Available at:http://www.revmultimed.sld.cu/index.php/mtm/article/view/383)

6. Rodríguez Albuja MJ, Pablo Jaramillo J. Effectiveness of an educational program in adolescent women with gingivitis. Medisan [Internet]. 2017 [cited 25 Feb 2020];21(7):850-6. Available at:http://scielo.sld.cu/pdf/san/v21n7/san11217.

7. Llerena Noda VY, Toledo Pimentel BF, Veitia Cabarrocas F, Barreto Fiu EE, Gutiérrez Álvarez I, Sasigaing Barreras A. Chronic inflammatory periodontal disease in young people in the Province of Villa Clara. Acta Médica del Centro [Internet]. 2016 [cited 26 Feb 2020];10(3):19-26. Available at:http://www.revactamedicacentro.sld.cu/index.php/amc/article/view/681/811

8. Chronic gingivitis and oral hygiene in adolescents from the "Raúl González Diego" secondary school. Havana Journal of Medical Sciences. 2018;11(4):484-95.

9. Murrieta-Pruneda JF, Juárez-López LA, Linares-Vieyra C, Zurita-Murillo V, Meléndez-Ocampo AF, Ávila-Martínez CR, et al. Prevalence of gingivitis associated with oral hygiene, family income, and time since the last dental visit in a group of adolescents from Iztapalapa, Mexico City. Bol Med Hosp Infant Mex. 2018;65(5):367-75. Available at: https://www.ncbi.nlm.nih.gov/pmc/articles

10. Ababneh KT, Hwaij Z, Khader Y. Prevalence and risk indicators of gingivitis and periodontitis in a Multi-Centre study in North Jordan: a cross sectional study. BMC Oral Health. [Online]2019 Available in:http://www.biomedcentral.com/14726831/12/1)

11. Gesser H, Peres MA, Marcenes W. Condições gengivais e periodontais associadas a fators socioeconômicos. Public Health Rev. 2019;35(3):289-93.

12. Wawrzyn-Sobczak K, Kozłowska M, Stokowska W, Karczewski JK. The evaluation of parodontium in medical students of the Medical University of Białystok according to CPITN index. Rocz Akad Med Bialymst. 2018;50(1):156-9.

13. Umoh AO, Azodo CC. Prevalence of gingivitis and periodontitis in an adult male population in Nigeria. Niger J Basic Clin Sci. 2019;9(1):65-9.

14. Rodríguez CA, Delgado ML. National Stomatologic Care Program Hopcraft MS, Morgan MV, Satur JG, Wright FA, Darby IB. Oral hygiene and periodontal disease in Victorian nursing homes. Gerodontology. 2018;29(2):220-8.

15. Perez Barrero BR, Duharte Garbey C, Perdomo Estrada C, Ferrer Mustelier A, Caldero B. Poor oral hygiene, smoking habits and chronic gingivitis in Venezuelan adolescents aged 15-18 years. Medisan [Internet]. 2019 [cited 10 Dec 2021];15(9):1-7.Orthodontics and periodontics, two specialties that go hand in handhttps://www.periodonciauruguay.com//wp-content-uploads-2018/04

16. Comprehensive to the Population. Havana: Medical Sciences Editora; 2018

17. Bertha L, Alfonso Calderón E. Behavior of gingivitis. Department of Stomatology of Conuco Viejo. Rev Med Electron [Internet]. 2017 [cited 30 Nov 2021];32(3). Available at:http://scielo.sld.cu/scielo.php?pid=S1684-18242010000300004&script=sci_arttext

18. Hopcraft MS, Morgan MV, Satur JG, Wright FA, Darby IB. Oral hygiene and periodontal disease in Victorian nursing homes. Gerodontology. 2017 [cited 2021 Nov 29];29(2):220-8. Available in:http://scielo.sld.cu/scielo.php?pid=S003475072003000100009&script=sci_arttext

19. Salinas Abatte SS. Prevalence of periodontal disease in adolescent patients treated during December 2018 at the Pilot School of Dentistry of the University of Guayaquil. [Specialist Thesis]. Ecuador: National University of Guayaquil. School of Dentistry; 2019 [cited 2020 January 12]. Available at:http://repositorio.ug.edu.ec/bitstream/redug/40313/1/SALINASshirley.pdf

20. Loredo S, Cruz M, Cazamayor L, Montero A. Behavior of chronic immunoinflammatory periodontal disease. Jovellanos. Matanzas. Rev Méd Electron [Internet]. 2019 [cited 01 Apr 2021];41(1):78-89. Available at:http://www.revmedicaelectronica.sld.cu/

21. Cuba. Ministry of Public Health. Hygiene and Epidemiology for Stomatology students. Volume II. Havana: Editorial Ciencias Médicas; 2019.

22. Use of chamomile in the treatment of periodontal diseases. Arch med Camagüey [Internet]. 2019 [cited 01 Apr 2021];23(3):[aprox. 11 p.]. Available at:http://scielo.sld.cu/scielo.php

23. Gonzáles M, Toledo B, Sarduy L, Morales D, Rosa H, Veitia F, et al. Compendium of Periodontology. 2nd ed. Havana: Editorial Ciencias Médicas; 2019.

24. Rodríguez A, Arcia L, Moreno O, Medina A, Rojas L. Efficacy and safety of chamomile tincture in the treatment of chronic edematous gingivitis. Multimed [Internet]. 2016 [cited 01 Apr 2021];20(5):[aprox. 15 p.]. Available at:http://www.medigraphic.com/pdfs/multimed/mul-2016/mul165h.pdf

25. Paz Latorge EI. Periodontal risk factors.<http://wwwmonografias [accessed: 2018].

26. Peña-Sisto M, Peña-Sisto L, Díaz-Felizola A, Torres-Keiruz D, LaoSalas N. Periodontal disease as a risk for systemic diseases. Rev Cubana Estomatol. 2018; 45 (1): 1-9

27. Rodríguez-Moreno A, Arcia-Cruz L, Moreno-Diéguez O, Andrés-Medina A, RojasPérez L. Efficacy and safety of chamomile tincture in the treatment of chronic edematous gingivitis. MULTIMED [Internet]. 2017 [cited 10 Apr 2020]; 20(5). Available at:http://www.revmultimed.sld.cu/index.php/mtm/article/view/391

28. Castro-Rodríguez Y. Periodontal disease in children and adolescents. A clinical case report. Rev Clin Periodoncia Implantol Rehabil Oral [Internet]. 2018 [cited 26 Feb 2020];1(1):36-8. Available at:https://scielo.conicyt.cl/pdf/piro/v11n1/0719-0107-piro-11-01-00036.pdf

29. Morffi Serrano Y. Social and economic impact of periodontal diseases in the population. CCM. 2018 Jun; 19(2): 326-8.

30. Romero-Castro NS, Paredes-Solís S, Legorreta-Soberanis J, Reyes-Fernández S, Flores Moreno M, Andersson N. Prevalence of gingivitis and associated factors in students from the Autonomous University of Guerrero, Mexico. Rev Cubana Estomatol [Internet]. 2019 [cited 26 Feb 2020];53(2):916. Available at:http://scielo.sld.cu/pdf/est/v53n2/est02216.pdf)

31. Contreras Rengifo Adolfo. The promotion of general health and oral health: a joint strategy. Rev. Clin. Periodontics Implantol. Rehabil. Oral [Internet]. 2016 Aug [cited 2020 Feb 25]; 9(2): 193-202. Available at: https://scielo.conicyt.cl/scielo.php?script=sci_arttext&pid=S07190107201600020 0018&lng=es.http://dx.doi.org/10.1016/j.piro.2016.07.003.

32. Ministry of Health. Epidemiological profile of oral health in Mexico 2019. Mexico: General Directorate of Epidemiology; 2019.

33. MonteiroLourençoQueiroz SI, Amarante da Silva MV, Costa de Medeiros AM, Teixeira de Oliveira P, de Vasconcelos Gurgel BC, Dantas da Silveira EJ. Recurrent aphthous ulceration: an epidemiological study of etiological factors, treatment and differential diagnosis. An Bras Dermatol.2018 [cited 01/23/2021];93(3):341-346. Available in:http://dx.doi.org/10.1590/abd1806-4841.20186228

34. Troya Borjes E, Martínez Abreu J, Padilla Suárez E, Iglesias López N, Ramos Ortega A. Recurrent aphthous stomatitis and stress situations as a risk factor. Rev Med Electron. 2020[cited 08/03/2021] 36(6):20-32.Available inhttp://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S16841824201400060001

35. Ministry of Public Health. Practical Guides in Stomatology. In: Gingival and periodontal diseases. Havana: MINSAP, 2019:34-123.

36. Cardentey J. Use of natural and traditional medicine in dental treatment. Arch Med Camagüey [Internet]. May-Jun 2020 [cited 02 Apr 2022];19(3):[approx. 4 p.]. Available at:http://www.scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-34662013000300010&lng=es

37. Steel, RG and Torrie IH 1988 Biostatistics principles and procedures. McGraw-Hill. Interamericana. Mexico SA 740 pp

38. Suárez Sayas Y, Pernio Rey J. Analysis of the Oral Health Status of the population, a necessity in primary care. [Online article]. Villa Clara Medical University. “Celia Sánchez” Stomatological Clinic, 2019. <http://www.bus.sld.cu> [Consultation 20/02/20].

39. Caballero Pupo LM. Prevalence and risk factors of periodontal diseases in adult patients at the Rubén Batista Rubio polyclinic in Cacocum. 2019

40. Del Toro Chang K. Periodontopathy in young adults in the Mario Gutiérrez Ardaya health area. Holguín. Work to obtain the title of Master in Community Oral Health 2018-2019. FCM Holguín.

41. Prevalence of periodontal disease and associated risk factors. “Pedro Borrás” Polyclinic, Pinar del Rio Rev Ciencias Med Pinar del Rio, Cited January 7, 2019. Available at:http://scielo.isciii.es/scielo

42. Doncel Pérez C. Vidal Lima M, Del Valle Portilla MC. Relationship between oral hygiene and gingivitis in young people. Rev Cub Med. Cited 24 Sep 2018, Available at:http://scielo.sld.cu/pdf

43. Reyes Guerra M, Ilisastígui Ortueta ZT. Periodontitis: its relationship with oral hygiene and smoking habits. XV National Congress of General Stomatology; 2020 Nov 19. Havana City: Convention Center.

44. Oliveira del Rio JA, Macías-Velásquez ZA, Mendoza-Castro AM.

45. Clinical-epidemiological characterization of special patients with chronic gingivitis. Dom. Cien. [Internet]. 2017 Oct [cited 04/08/2021]; 3(4):250-263. Available at:http://dominiodelasciencias.com/ojs/index.php/es/article/view/674/pdf

46. Peña Rosell A, Capote Femenías JL, Jover Capote N. Main observations in chronic fibroedematous gingivitis. Rev.Med.Electrón. [Internet]. 2019 Feb [cited 2022 Feb 01] ; 41(1): 54-62. Available at:http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1684-18242019000100054&lng=es

47. Pérez-Ayala O, Vigo-Pérez Y, Vizcay-Herrezuelo N, Gutiérrez-Torres D, Duarte-Lisimón J. Treatment of chronic edematous and fibroedematous gingivitis. MEDISAN [online journal]. 2019 [cited 1 Feb 2022]; 23 (6) :[approx. 11 p.]. Available at:http://medisan.sld.cu/index.php/san/article/view/2898

48. Caballero Pupo LM. Prevalence and risk factors of periodontal diseases in adult patients at the Rubén Batista Rubio polyclinic in Cacocum. 2019

49. Rojas Escobar R. Periodontal disease in office # 23 of the Artemio Mastrapa Stomatological Clinic. Holguín .2019– 2020. [Work to obtain the title of first degree specialist in Comprehensive General Stomatology]. 2020. Faculty of Medical Sciences "Mariana Grajales Coello", Holguín.

50. García Vázquez M, Badillo Barba. Oral manifestations in patients with diabetes mellitus. Dentistry (cited 21/07/2019) Available in:http://www.imbiomed.com.mx/1/1/articulosphp

51. Periodontal status and oral hygiene in people over 19 years of age, Northern Area. Sancti Spiritus 2020. Gac Med Espirit.

52. Physiological effects of smoking as a risk factor for periodontal disease. Rev Finlay, 2019;43(5):1-6.

53. Morales A, Bravo J, Baeza M, Werlinger F, Gamonal J. Periodontal diseases as chronic non-communicable diseases: Changes in paradigms. Rev Clin Periodoncia Implantol Rehabil Oral [Internet] 2019, [cited 27 Feb 2020];9(2): 203-207. Available at:http://dx.doi.org/10.1016/j. pyro.2019.07.004

54. Torres López M, López Nápoles D, Díaz Álvarez M. Chronic inflammatory periodontal disease in diabetic patients. Camilo Cienfuegos Teaching Hospital. Sancti Spíritus 2018-2019. GME [Internet] 2019 [cited 22 Aug 2020] 11(1): 41-47. Available at:http://revgmespirituana.sld.cu/index.php

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

ANNEXES:

ANNEX 1

Love Index (Oral Hygiene Index)

It is performed in approximately 3 minutes and is of great help in patient education.

PDB developer substance is used

The total surface of each tooth face is taken as a unit.

It is rated

3.1____ If the surface is clean

3.2____ If the surface is dirty or colored

Neither the third molars nor the occlusal surfaces are taken into account.

Method

- Use disclosing substance
- Using a mirror, evaluate the surfaces according to established criteria, that is, the surfaces that appear colored (the occlusal surfaces are not taken into account).
- Count the number of colored surfaces and write down the number of points obtained.
- Divide the total points obtained by the total number of surfaces examined (number of teeth present by 4)
- Multiply the result by 100

$$IAHB = \frac{\text{No stained surfaces}}{\text{Number of surfaces examined}} \times 100$$

7	6	5	4	3	2	1

1	2	3	4	5	6	7

ANNEX 2

DATA COLLECTION FORM

Name and Surname: _____1. Age (years):

- 19-23
- 24-28
- 29-34. Sex:

2.1 F _____

2.2 M_____

3-Prevalence and severity of periodontal disease

3.3____ Value 0
3.4____ Value 1
3.5____ Value 2
3.6____ Value 6
3.7____ Value 8

4-Risk factors present

- Poor oral hygiene
- Smoking
- Diabetes mellitus
- Stress
- Teeth that were requested and not replaced
- Injurious habits (biting objects, cheilophagia onychophagia)

5-Level of knowledge

55. Well
56. Regular
57. Bad

To measure the level of knowledge, the following questions will be asked:

ANNEX 3

SURVEY TO MEASURE LEVEL OF KNOWLEDGE

1. Do you think that people, even if they do not have pain or feel anything, should visit the Stomatologist:

1,1._____ Yeah
1,2._____ No
1,3._____ He doesn't know

2. How often would you visit him to maintain proper oral health:

2.1.____ Once a year
2.2.____ Every 2 years
2.3.____ Every 3 years
2.4.____ When something hurts me
2.5.____ Other. Which: _____

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

3. Of the following aspects, which do you think is beneficial for your oral health?

3,1____. Eat candy
3,2____. Brush 4 times a day
3,3____. Eat foods rich in protein and minerals
3,4____. Not brushing your teeth before going to bed
3,5____. Eating very hot and spicy foods.
3,6____. Biting objects with your teeth, for example opening bottles
3,7____. Gritting teeth while sleeping
3,8____. Brush your teeth only when you get up
3,9____. Go to the dentist for any discomfort in the mouth
3,10____. Not brushing your tongue when brushing your teeth

4. What habits do you think affect teeth and oral tissues? (Do not read the list of options, mark with an "X" the answers that are not the same as the respondent's answers).

4.1)____ Nail biting (Onychophagia)
4.2)____ Cheek biting (Cheilophagia)
4.3)____ Thumb Sucking (Digital Sucking)
4.4)____ Smoke
4.5)____ Eat sweet foods
4.6)____ Eat fruits and vegetables
4.7)____ Biting toothpicks with your teeth
4.8)____ Sleeping with your mouth open
4.9)____ Chew on one side only
4.10)____ Others. Which: _____

5. Do you know where you should go if you feel any pain or discomfort or any warning signs in your mouth?

5.1) _____ Medical Office (Family Doctor)
5.2) _____ Stomatological Clinic (Stomatology)
5.3) _____ Hospital
5.4) _____Stomatology On-Call Corps
5.5) _____ Does not know

Key: Total value 100 points. It will be broken down as follows

Question 1: Value 10 points if it marks 5.1

0 points if you check any of the other options

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

Question 2: Value 10 points 2 points for each correct answer

You must mark 2.1 and 2.4. and consider 2.5 correct depending on the assessment made if you put another acceptable answer.

Question 3: Value 30 points. 3 points will be given for each correct answer.

Must mark 3.2; 3.3; 3.9

Question 4: Value 30 points. 3 points will be given for each correct answer

Must mark 4.1;4.2;4.3;4.4;4.5;4.7;4.8;4.9

In 4.10, assess any other habits that are considered harmful to oral health.

Question 5: Value 20 points 4 points for each correct answer

Must mark 5.2 and 5.4

According to what I get in the survey
Good: If you get 100 to 80 points.
Regular: if you get 79 to 70 points.
Bad: If you get less than 7.0 points.

Anatomía Digital
ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024
www.anatomiadigital.org

ANNEX 4

RUSSELL PERIODONTAL INDEX WHO REVISED FORM (IP-R)

It is a simpler variant of the Russell periodontal index. In the IP-R, only the value assigned to the most severely affected tooth of each individual examined is recorded. The classification of the periodontal status is carried out according to Russell's criteria.

This index can be used to quickly determine both the prevalence and severity of periodontal disease in a population; it has been widely used in Cuba.

A grade of 8 is assigned when a tooth is observed to have mobility, pathological migration and loss of function.

The value 6 is applied when the greatest severity is given by the presence of a periodontal pocket.

A score of 2 is recorded when the most severe sign found is gingival inflammation and it completely surrounds a tooth; however, when this inflammation does not completely surround the tooth, the score is 1. If there are no signs of periodontal inflammation, a score of 0 is recorded for that individual.

TABLE 1

Percentage distribution of patients according to level of knowledge of risk factors for gum disease.

Level of knowledge	No	%
High	11	27.5
Half	13	32.5
Low	16	40
Total	40	100

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

ANNEX 5

INFORMED CONSENT

I _____ agree to participate in the study "Gingival diseases in the population aged 19 to 34. Batabanó.2021-2023".

It has been clearly explained to me that participation is voluntary and that the data relating to the patients included in this study will be handled discreetly and the confidentiality of the results will be maintained and will be used only for scientific and educational purposes.

Therefore, by signing this document on the __ day of the month of _____ of the year _____, I declare my approval to be part of the study.

Name and signature of respondent: _____

Name and signature of the researcher: _____

Name Signature of Witness: _____

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

ANNEX 6

APPROVAL OF THE STOMATOLOGY DEPARTMENT OF THE STOMATOLOGICAL CLINIC OF BATABANÓ

Through this document, authorization will be requested for the conduct of the research entitled: ¨**Gingival diseases in the population aged 19 to 34 years. Batabanó. 2021-2023**¨ which will be carried out by the stomatology department of the Batabanó stomatology clinic by Dr. Adainy Martínez González and Dr. Katyleidis Pérez Acosta.

Without further ado,

_____

Director of the Clinic

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

ANNEX 7

HAVANA HIGHER INSTITUTE OF MEDICAL SCIENCES

MAYABEQUE FACULTY OF MEDICAL SCIENCES

DEPARTMENT OF TEACHING AND RESEARCH

ENDORSEMENT BY THE SCIENTIFIC COUNCIL

At _____ on the ____ day of _____of 20__, the Municipal Scientific Council meets in order to analyze the work entitled: _____

_____

of the (the)_____

who opts for the_____

The research paper is titled:

Being Present:

After analyzing the research work, it is evaluated as:

_____Approved

_____Failed.

_____Approved with recommendations

For the record we sign:

_____ _____ _____

President of the CC Secretary of the CC Head of the DI Department

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

ANNEX 8

Data collection form
1.- General information:
Name and Surname_____
School: _____
Age: ___12 ___13 ___14 ___15
Sex: ___ Female ____Male
Presence and severity of Gingivitis:
Healthy___
Mild gingivitis___
Moderate gingivitis ___
Severe gingivitis _____
Type of gingivitis: ___ Edematous ___ Fibrous ___ Fibroedematous
Type of orthodontic treatment: __ Fixed Technique ___Removable Technique
Brushing Efficiency: ___efficient ____poor
Time elapsed with orthodontic treatment:
___From 1 to 6 months ___ From 7 to 12 months ____ From 12 or more

ISSN: 2697-3391
Vol. 7 No. 2, pp. 78 – 110, April - June 2024

www.anatomiadigital.org

The published article is the sole responsibility of the authors and does not necessarily reflect the thinking of the Anatomía Digital Journal.

Indexaciones