

## Prevalence of partial edentulism according to the Kennedy classification in patients of the faculty of dentistry at the Universidad Autónoma de Campeche 2022

## Prevalencia de edentulismo parcial según la clasificación de Kennedy en pacientes de la facultad de odontología de la Universidad Autónoma de Campeche 2022

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### Abstract

Poor oral hygiene in adult patients, reported and analyzed in different studies that have been done worldwide, has generated a high rate of dental loss. Partial edentulism is defined as a state of oral health that is the cause of an adverse effect of the state of oral health that corresponds to the absence of a certain number of teeth in the mouth. Most of the population has an incomplete but functional dentition, there is another large population group that does not have prosthetic restorations, which are very necessary. The causes of partial edentulism can be congenital or acquired. Total congenital edentulism manifests as a very serious congenital syndrome, which, generally, are not compatible with the patient's life. On the other hand, acquired edentulism refers to dental loss during one's life and can be of secondary causes such as caries or dental loss as mentioned, such is determining the prevalence of partial edentulism in patients of the Faculty of Dentistry at the Universidad Autónoma de Campeche with the Kennedy classification. The loss of dental pieces results in the alteration of the stomatognathic system, resulting in the alteration of the masticatory function, affecting the nutritional state, general health and quality of life. Several studies have affirmed that edentulism, in addition to being related to the patient's nutritional state, is also associated with the following factors: quality of life, age, gender of the patient. An observational, descriptive cross-sectional study was carried out at the Universidad Autónoma de Campeche, in the clinics of the Faculty of Dentistry. The population for this study was 100 subjects. The total number of subjects studied was 100 subjects (n=100), 51% were male and 49% female, the mean age was 59 years with a standard deviation of 11 and a range of 53. Regarding the variable, educational stage, the majority only studied middle school followed by primary school. The distribution of the prevalence of partial edentulism with respect to sex, Kennedy class II reported prevalence in males with 21%. It is followed by class I in males with 10%, class III in third place but in females with 18% and finally class IV where females also prevail with 12%. This study shows that the most prevalent of evaluated patients was found to be Kennedy class II in the male sex, since it was the most representative of the population with 21%, while, on the part of the female patients, it was 18% in class III.

### Resumen

La mala higiene bucal en pacientes adultos, reportada y analizada en diferentes estudios que se han realizado a nivel mundial, ha generado un alto índice de pérdida dental. El edentulismo parcial se define como un estado de salud oral que es la causa de un efecto adverso del estado de salud oral que corresponde a la ausencia de un cierto número de dientes en la boca. La mayoría de la población tiene una dentición incompleta pero funcional, hay otro gran grupo de población que no tiene restauraciones protésicas, que son muy necesarias. Las causas del edentulismo parcial pueden ser congénitas o adquiridas. El edentulismo congénito total se manifiesta como un síndrome congénito muy grave, que, generalmente, no son compatibles con la vida del paciente. Por otro lado, el edentulismo adquirido se refiere a la pérdida dental durante la vida y puede ser de causas secundarias como caries o pérdida dental como se mencionó, tal es determinar la prevalencia de edentulismo parcial en pacientes de la Facultad de Odontología de la Universidad Autónoma de Campeche con la clasificación de Kennedy. La pérdida de piezas dentarias trae como consecuencia la alteración del sistema estomatognático, resultando en la alteración de la función masticatoria, afectando el estado nutricional, la salud general y la calidad de vida. Diversos estudios han afirmado que el edentulismo, además de estar relacionado con el estado nutricional del paciente, también está asociado a los siguientes factores: calidad de vida, edad, sexo del paciente. Se realizó un estudio observacional, descriptivo de corte transversal en la Universidad Autónoma de Campeche, en los consultorios de la Facultad de Odontología. La población para este estudio fue de 100 sujetos. El total de sujetos estudiados fue de 100 sujetos (n=100), 51% fueron hombres y 49% mujeres, la edad promedio fue de 59 años con una desviación estándar de 11 y un rango de 53. En cuanto a la variable etapa educativa, la mayoría sólo cursó la enseñanza media seguida de la primaria. La distribución de la prevalencia de edentulismo parcial con respecto al sexo, la clase II de Kennedy reportó prevalencia en varones con 21%. Le sigue la clase I en varones con un 10%, la clase III en tercer lugar pero en mujeres con un 18% y por último la clase IV donde también prevalecen las mujeres con un 12%. Este estudio muestra que el más prevalente de los pacientes evaluados resultó ser Kennedy clase II en el sexo masculino, ya que fue el más representativo de la población con un 21%, mientras que, por parte de los pacientes femeninos, fue de 18% en la clase III.

Dental prosthesis, Oral health, Aesthetics

Prótesis dental, Salud oral, Estética

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## Introduction

The deficient oral hygiene in "adult" patients reported and analysed in different studies that have been carried out worldwide has been generating a high rate of dental loss. The present research work refers to the prevalence of partial edentulism, since partial edentulism is defined as a state of oral health that is the cause of an adverse effect of the state of oral health that corresponds to the absence of a certain number of teeth in the mouth. According to the World Health Organisation (WHO), caries and periodontal diseases are the main causes of tooth loss. Worldwide, 60-90% of school children and almost 100% of adults have tooth decay. Severe periodontal diseases, which can lead to tooth loss, affect 15-20% of middle-aged adults (35-44 years). The majority of the population has an incomplete but functional dentition, there is another large population group that does not have a prosthetic restoration and it is often very necessary. The causes of partial edentulism can be congenital or acquired.

Total congenital edentulism manifests as a very severe congenital syndrome, which are generally not compatible with the patient's life. Acquired edentulism, on the other hand, refers to the fact of tooth loss during our lifetime and can be secondary to the aforementioned caries or tooth loss. The loss of teeth results in the alteration of the stomatognathic system, resulting in altered masticatory function, which affects nutritional status, general health and quality of life. Several studies have affirmed that edentulism, besides being related to nutritional status, is also associated with the following factors: quality of life, age and gender of the patient. A very important point is the socio-economic level of the patient, as it is important for access to conservative or preventive treatment and this leads to an increase in the prevalence rate of edentulism. The Kennedy classification shows us the type of edentulous gap with the highest prevalence, as well as the proposal for conservative and comprehensive treatment. Due to the little information that exists on the subject in our environment, we present this study with the aim of describing the prevalence of partial edentulism according to Kennedy's classification and to study how it is presented in patients according to age, gender and location of the maxilla.

The study will be carried out in the Faculty of Dentistry of the Autonomous University of Campeche in the period 2020 II, this will allow us to collect important data that will be added to the research on the prevalence of edentulism collected from the data collection forms. The prevalence of partial edentulism will also allow us to focus on prevention techniques before the disease occurs, early diagnosis of the disease and the necessary oral rehabilitation therapy for the partially edentulous. The present work is for the consideration of the students of the career of Dentistry, graduates and public in general so that it can be used as a means of information, investigation and support for other subsequent investigations.

## Problem statement

In spite of the existence of preventive measures for all ages, edentulism continues to be one of the problems that a patient can present, due to different causes. Dentistry is considered a very important science within the biopsychosocial wellbeing, impacting both the emotional and psychological aspects of the individual, presenting non-aesthetic factors that have a greater impact on an individual than the masticatory function itself. The Kennedy classification shows us the type of edentulous gap with the highest prevalence, as well as the proposal for conservative and comprehensive treatment. Due to the little information that exists on the subject in our environment, we present this study with the aim of describing the prevalence of partial edentulism according to Kennedy's classification and to study how it is presented in patients according to age, gender and location of the maxilla. The study will be carried out in the Faculty of Dentistry of the Autonomous University of Campeche in the period 2020 II, this will allow us to collect important data that will be added to the research on the prevalence of edentulism collected from the data collection forms. The prevalence of partial edentulism will also allow us to focus on prevention techniques before the disease occurs, early diagnosis of the disease and the necessary oral rehabilitation therapy for the partially edentulous. The present work is for the consideration of the students of the career of Dentistry, graduates and public in general so that it can be used as a means of information, investigation and support for other subsequent investigations.

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## Theoretical framework

Oral diseases become a major health problem due to their high prevalence, public demand and strong impact on individuals and society, and are considered an integral part of the craniofacial complex involved in vital functions such as nutrition, communication and affection; therefore, oral health is related to wellbeing and quality of life from functional, psychosocial and economic points of view. They also affect a limited area of the human body but their consequences and impact affect the body as a whole. The World Health Organisation WHO defines oral health as the absence of oral or facial pain, oral or throat cancer, infections or ulcers, periodontal disease, dental caries, tooth decay, tooth loss, as well as other diseases and disorders that limit an individual's ability to bite, chew, laugh, laugh, speak or compromise psychosocial well-being. Oral disease is the result of specific health conditions, responses to exposure to certain bacterial agents, diet rich or lacking in carbohydrates, fluorides, poor oral hygiene habits, access to dental care, acquisition of knowledge about oral problems, individual responsibility for one's own health, consistent attendance at services and others. Oral health is not only related to the presence of teeth naturally or artificially, it is also related to the condition of the teeth, as well as the condition of the soft tissues of the oral cavity that do not disturb the functional capacity of the specific oral cavity and the general health of the individual. The preservation of oral health is of paramount importance for proper nutrition and relationships with others. Among the main diseases that affect the oral cavity are dental caries, which is defined as an infectious disease of multifactorial origin characterised by the softening of the hard tissue of the tooth that evolves to form a cavity, or the loss of teeth if it continues its natural evolution without treatment.

A large part of the population suffers from it unnecessarily, mainly due to lifestyle, diet and inadequate oral hygiene, as well as restricted access to dental health services, lack of oral care culture and the high costs of dental care, among others. According to several authors, the main causes of tooth loss are dental caries and periodontal disease, which are public health problems due to their prevalence and incidence; periodontal disease is the main cause among adults. According to tooth type, molars are mainly extracted for caries and anterior teeth for periodontal disease.

According to the report "Global Burden of Oral Conditions in 1990-2010" derived from The Global Burden of Disease GBD 2010 Study, oral diseases and disorders remain highly prevalent, collectively affecting around 3.9 billion people worldwide. The most common problem, of all the conditions assessed in the study, and with the greatest global burden of disease was untreated dental caries in the permanent dentition, while severe periodontitis and untreated caries in primary teeth were the sixth and tenth most prevalent conditions, affecting 11% and 9% of the world's population, respectively. Similarly, severe tooth loss was the 36th most prevalent condition, with a global estimate of 2%. For a long time, people considered tooth loss to be a natural occurrence and a characteristic of advancing age. With the development of society and the increase in educational level, populations became more aware of the need to maintain their teeth and even keep them healthy, but this philosophy has not reached everyone equally, as it has become a challenge for stomatology to extend and achieve it.

Tooth loss alters the functions of the stomatognathic system, such as mastication, phonetics and aesthetics. In the case of the masticatory function, it can lead to a change in the person's diet, forcing new dietary practices determined by a greater consumption of soft and easy to chew foods, causing dietary restrictions and compromising the person's nutritional status. Tooth loss is a complex outcome that reflects an individual's history of dental disease mainly dental caries and periodontal disease and their treatment by dental services throughout life.

However, it shows not only dental disease, but also the attitudes of patients and dentists, the dentist-patient relationship, the availability and accessibility of dental services, and the prevailing philosophies of dental care. People suffering from edentulism see their quality of life diminished, as they cannot consume certain types of food, the masticatory process is deficient and therefore the digestive process and adsorption of nutrients extracted from food, phonation is severely affected and therefore the communicative process and facial aesthetics, self-esteem is impaired, the assessment and perception of edentulism is defined as the total or partial absence of dental pieces, which will not be replaced later in a natural way.

In order to simplify the description, compression and design of partial dentures in edentulous jaws, several classifications have been created. With the above we can understand that the lack of teeth in a person is an important alteration to consider because it can alter their physical condition in general, as well as their state of mind and general state of health; it is classified as partial or total edentulism; it can be preventable, irreversible and constitutes a mutilation, a loss of physical integrity. It is the result of systemic diseases such as diabetes and prevalent oral diseases.

The causes are diverse, the main ones being dental caries, chronic periodontitis, root fractures, poor oral hygiene and socio-demographic level, or it can be secondary to orthodontic reasons, aesthetics, prosthetic needs, trauma, generated by socio-economic, cultural factors, private policies that favour inequalities, inequities in health. Tooth loss alters the functions of the stomatognathic system, such as mastication, phonetics and aesthetics. In the case of the masticatory function, it can lead to a change in the person's diet, forcing new dietary practices determined by a greater consumption of soft and easy to chew foods, causing dietary restrictions and compromising the person's nutritional status. It should be emphasised that all the components of the stomatognathic system suffer alterations in position, size and contour, including the bony modification that will result in the new edentulous ridge.

The partial edentulous person is able to re-establish the function of chewing, phonation and swallowing, through the preparation of the removable partial prosthesis by the specialist in oral rehabilitation. Due to the great variety of cases of partial edentulism, it was necessary to establish a classification system, which was elaborated by Edward Kennedy in 1925. This system allowed the dental professional to design the prosthetic appliance in the most effective way and to know the state of conservation of the dental pieces in the mouth. Kennedy is credited with the initiative to present a way of classifying the partially edentulous. Most of the studies that include a way of classifying partially edentulous arches use Kennedy's classification.

In Venezuela, as well as studies carried out abroad, it is observed that the lower Kennedy Class I is the most frequent type of partially edentulous arch. This is related to the general pattern of tooth loss, which shows that molars are lost first, followed by premolars and finally lower anterior teeth. The method proposed by Edward Kennedy in 1925 attempts to group partially edentulous arches so that principles can be established to facilitate the design of each situation. Kennedy's classification sets out the different options that can be observed in a partially edentulous patient and allows a very practical and quick recognition and identification of their condition, as well as the approach to the most favourable design to solve the case being analysed.

Class I Partially edentulous arch with bilateral edentulous areas distal to the remaining natural teeth. Class II Partially edentulous arch with a unilateral edentulous area distal to the remaining teeth. Class III Partially edentulous arch with a unilateral edentulous area with natural teeth remaining anterior and posterior. Class IV Partially edentulous arch with an edentulous area anterior to the remaining natural teeth and crossing the midline. Applegate provides eight rules to facilitate the application of Kennedy's method.

Rule 1: All grading should be done after the indicated tooth extractions have been performed. Rule 2: If a third molar is missing and therefore not replaced, it should not be considered for classification. Rule 3: If a third molar is present and is to be used as an abutment, it should be considered for classification.

Rule 4: If a second molar is absent and is not to be replaced due to lack of antagonist, it is not to be considered for classification. Rule 5: The posterior edentulous area(s) shall be determined by the classification. Rule 6: Edentulous areas other than those determining classification are called modification areas and shall be designated by a number. Rule 7: Only the number of edentulous areas and not their extent shall be considered. Rule 8: In Class IV there shall be no modification zones. Any subsequent edentulous areas will result in a change of class.

Dental caries is a multifactorial, transmissible pathology of infectious origin that affects the dental pieces, producing the progressive destruction of hard tissues and in which modulating etiological factors are involved, such as general health, socioeconomic level and level of education, among others. Caries usually starts hidden from view in the fissures of the tooth or in the interdental spaces. In its initial stage it can be stopped and even reversed, but in its advanced stage a cavity is formed. At this point, treatment is necessary to restore the function of the tooth, including removal of the decayed tissue and a filling or crown. If left untreated, caries can lead to extensive destruction of the tooth, with pain and infection.

The latter can lead to abscess formation or even septicaemia. Endodontic treatment or extraction of the tooth is necessary at this stage. The reduction of acid attack of the tooth enamel can be achieved by reducing the total intake and frequency of sugar consumption. Protection of the tooth surface can be achieved by ensuring adequate exposure to fluorides. Actions can also be taken to reduce the effect of biofilm through good oral hygiene. Studies reported worldwide on its prevalence, such as the World Health Organization in 2004, showed 60-90% in school children and almost 100% in adults, and the Dental Federation International in 2010, found 44%, affecting almost half of the population. Dental caries is a disease of high prevalence and severity in the populations of many countries. In industrialised countries it affects more than half of the population, and because it is a cumulative process, the severity of the damage increases with increasing age. From the perspective of causality, caries is a complex disease as it is caused by the interaction of different mechanisms.

For its analysis, the action of several genes, environmental, cultural, social and local factors must be considered. Several authors mention that dental caries is a public health problem due to its high prevalence. Dental caries is a process that can evolve and lead to tooth loss if not treated in a timely manner. In Mexico, it has been documented that the prevalence of dental caries is between 70 and 85% in the secondary dentition at the age of years.

The onset of the carious process cannot be attributed to a single cause, since its development requires a confluence of factors that determine the carious lesion, i.e., that the aggression of the dental enamel is of great magnitude, that the resistance of the enamel to acid dissolution is insufficient, and that the mechanisms of remineralisation of the enamel do not take place. When dental caries reaches the deep dental tissues, it becomes an emergency in stomatological services, but only if we know how this condition starts and spreads can we cure and prevent it. It is in this direction that the greatest efforts to control this most frequent disease should be directed. It is for these reasons that we were motivated to carry out this work. Dentists fill teeth by removing decayed tooth material with the use of a dental drill and replacing it with a material such as silver alloys, gold, porcelain or composite resin. The latter two materials most closely resemble the natural appearance of the tooth and may be preferred for front teeth. Many dentists consider silver and gold alloy amalgams to be stronger and tend to use them for the back teeth, although there is a tendency to use the highly resistant composite resin for the back teeth as well.

Periodontal disease: Certainly in the last decade there has been increasing evidence that periodontal disease is a global public health problem that health systems need to address and that periodontal disease is the leading cause among adults. According to tooth type, twenty-one molars are extracted mainly due to caries and anterior teeth due to periodontal disease. Tooth decay and periodontal disease in advanced stages cause pain and the individual, when he or she does not have sufficient resources, prefers to remove it by tooth extraction, and is reluctant to face long and expensive conservative treatment, which is often not available in public health services. Specific bacteria are the essential cause of periodontal diseases.

Other important risk factors are smoking, unhealthy diet, genetic factors, stress or excessive alcohol consumption. Periodontal diseases are also associated with certain systemic diseases such as diabetes, cardiovascular diseases, respiratory diseases and some complications during pregnancy. Periodontal disease is a bacterial disease that causes low-intensity infection, with important metabolic consequences and local inflammatory reactions that destroy supporting and protective tissues of the tooth. Gingivitis Periodontal disease begins with gingivitis, a chronic inflammation of the gums, which is very common and reversible for most patients. It can progress to periodontitis, a more serious situation in which there is destruction of the supporting bone.

In 15% of the population the disease can progress to severe periodontitis which can lead to tooth loss. The most difficult part is to identify the sites that are already progressing from gingivitis to periodontitis. We can find sites with a depth of 4 mm but still no radiographic evidence of bone loss and this is mainly due to the low sensitivity of radiography and probing error. It has been calculated that the probing error is approximately 1 mm and added to the degree of inflammation, we can easily go from 3 mm to 4 mm. This must be carefully analysed by interpreting all periodontal clinical parameters. The extent of gingivitis can be classified as localised  $\leq 30\%$  of affected sites and generalised  $>30\%$  of affected sites. It can also be marginal, papillary and diffuse. Periodontitis is the most common chronic inflammatory disease seen in humans. It is a major public health problem, causing tooth loss, disability, masticatory dysfunction and nutritional status. Poor nutritional status. The manifestations of periodontitis also include bleeding, halitosis, gingival recession and tooth loss, which can have an impact beyond the individual sufferer. Periodontitis also compromises speech, reduces quality of life and is an increasing burden on the economy. Chronic periodontitis Unlike gingivitis, periodontitis is inflammation of the gingiva and supporting periodontium, significantly affecting gingival connective tissue, periodontal ligament, cementum, bone. Pathognomonic findings include inflammation, bleeding on probing, periodontal pocket formation, attachment loss and radiographic bone loss.

Aggressive periodontitis Aggressive periodontitis usually occurs in individuals under 35 years of age, but it is suggested that it can occur at any age. The rate of periodontal destruction is rapid and since it begins early in life, the destruction is seen in younger subjects. But the analysis should not be based on age alone but on clinical findings, radiographic findings, family and personal history, laboratory aids. In the early stages of periodontal disease, most of the treatment consists of scaling and root planing, which means removing plaque and tartar in the pockets around the teeth and smoothing the root surfaces. In most cases of early periodontal disease the above treatment and daily home care is all that is required for a satisfactory result. More advanced cases may require surgical treatment. Early diagnosis of periodontal diseases is one of the main motivations for today's dental practice. With prevalence data being so contumacious, the prevention of gingivitis and periodontitis is one of the basic commitments of a dentist to the society in which he or she develops as a health professional.

#### *Background and terminology*

Luna Gabriel in his thesis, incidence of partial edentulism according to the Kennedy classification in the social rehabilitation centre of the city of Loja in the period June - November 2011, carried out an observational, descriptive and cross-sectional study, where he obtained the following results: Kennedy class III is the most frequent in both jaws with a total of 55.72% and modification III-1 in both jaws with 26.91%. According to age, in the ranges: under 20 years, 20 to 39 and 40 to 59 years, Kennedy class III is the most frequent, with the exception of the range over 60 years, in which class I is the predominant one. According to sex, in both men and women and in both jaws, Kennedy class III was the most frequent. Vega L. in Trujillo, Peru carried out a study to determine the prevalence of partial edentulism according to the Kennedy classification in adult patients attended at the second specialisation unit in stomatology of the national university of Trujillo during the years 2011-2016.

A descriptive, retrospective and cross-sectional study was carried out. A total of 399 clinical histories of adult patients between 25 and 70 years of age who met the selection criteria were evaluated in this study. Class III was found to be the most prevalent 50.59%, followed by Class II 16.81%, Class I 14.9% and Class IV 1.62%. In the upper jaw class III was the most prevalent 66.9%, followed by class II 18.2%, class I 11% and IV 3.9%, while in the lower jaw class III was the most prevalent 53.8%, followed by class I 24.3%, class II 21.92%, with no record of class IV. According to modifications, the most prevalent in the upper jaw was class III with modification 2 26.7% and modification 1 24.2%; and in the lower jaw, class III modification 1 27.1%. According to age group, class I prevailed in the 56-70 age group 24.4%, class II 22.2% in the 56-70 age group, class III 77.9% between 25-40 years and class IV 3.1% between 56-70 years. Regarding gender, class III is the most frequent in males 63.3% and in females 58.3%. It is concluded that there was a higher prevalence of Kennedy class III in both jaws, genders and age groups. Loja Carlos from the University of Cuenca in Ecuador. He carried out a study to determine the prevalence of partial edentulism according to Kennedy class in patients who attended the clinic of the Faculty of Dentistry of the University of Cuenca during the periods 2012-2016. The results showed a higher prevalence of class III with 57.8%, followed by class II with 13.1%, class I with 8.3% and class IV with 0.5%, with no association between sex and the type of arch affected by edentulism. 3 Fernández Miguel. The objective was to determine the prevalence and distribution of edentulism, as well as the associated socio-demographic and socio-economic variables in individuals aged 35 years and over. A cross-sectional study was conducted in 656 randomly selected subjects. Men and women aged 35 years and older were included in the study. The mean age was  $49.06 \pm 10.33$ . The individuals were mainly female 63.3%. The overall prevalence of edentulism was 15.7% CI 95%: 12.9-18.5; among females it was 17.6% and in males 12.5%  $p = 0.081$ . The prevalence of edentulism was higher among older subjects  $p < 0.001$ . It was observed that the higher the schooling  $p < 0.001$ , the higher the socioeconomic level  $p < 0.001$  and in those who had a car at home  $p < 0.05$ , the prevalence of edentulism was lower. Patiño Suárez María Magdalena et al. in their article edentulism, functional dentition in older adults in Tuxtla Gutiérrez, Chiapas 2019.

The objective was to evaluate the prevalence of edentulism and functional dentition, as well as its association with some sociodemographic factors in the older adult population who attended dental care at the Faculty of Dental Sciences and Public Health of the University of Sciences and Arts of Chiapas. Cross-sectional study of 441 MA between 60 and 89 years of age. Data were collected through a questionnaire and oral examination, the average age was  $68.9 \pm 7.13$  years, the majority were women 69.4%. The prevalence of edentulism was 25.6%, with a higher  $p > 0.05$  being found between the groups. In all groups, patients had mild or moderate TMD. Results of this clinical study showed that the presence of TMD in removable partial denture wearers could not be correlated with Kennedy's classification, once the presence of TMD in patient Lopez Judith In her thesis: Prevalence of partial edentulism according to the Kennedy Classification in the Oral Rehabilitation Service of the "Cirujano Mayor Santiago Távara" Naval Medical Centre in Lima, Peru 2009, she studied patients between 20 and 90 years of age of both sexes in the Oral Rehabilitation Service of the "Cirujano Mayor Santiago Távara" Naval Medical Centre, for which 161 patients were sampled, 145 men and 16 women. As a result, Class I was the Kennedy Class that presented the highest percentage with 38.43%, followed by Class II with 37.68%, Class III with 23.3% and finally Class IV with 1.1%. Strict mandibular Class I without modification proved to be the most frequent in relation to the other classifications taking into account modifications with 20.4%. No cases of Class IV were found in the lower jaw or in the female sex.<sup>7</sup> According to Charieva et al, the most frequent type of partial edentulism in this sample of patients from the European Union in 2012 was Kennedy type III, both in the upper (50.0%) and lower jaw (41.1). Kennedy class IV was the most frequent (7.1% in the maxilla, 5.6% in the mandible) in at least the majority of cases treated with removable partial dentures in both arches.<sup>8</sup> Cordova, Heydi conducted a research study whose general objective was to determine the prevalence of partial edentulism according to the Kennedy classification in patients aged 30 to 59 years from the centre Imágenes Estomatológicas EIRL, Lima 2017. The sample consisted of 150 panoramic radiographs of partially edentulous patients.

The results showed that 32% of the population had a prevalence of Kennedy Class I partial edentulism, 26.7% Kennedy Class II, 39.3% Kennedy Class III and 2% Kennedy Class IV. Also, of the total population with partial edentulism in the upper jaw, 23.9% had a Kennedy Class I, 32.6% a Kennedy Class II, 36.9% a Kennedy Class III and 6.6% a Kennedy Class IV. In the lower jaw, 35.6% had a Kennedy Class I, 24% a Kennedy Class II, 40.4% a Kennedy Class III and 0% a Kennedy Class IV. On the other hand, it was also found that, of the total male population, 30% had a Kennedy Class I, 24.3% a Kennedy Class II and 45.7% a Kennedy Class III, while of the total female population, 33.75% had a Kennedy Class I, 28.75% a Kennedy Class II, 33.75% a Kennedy Class III and 3.75% a Kennedy Class IV. The prevalence of partial edentulism according to Kennedy Class I presented modification I with 47.9%, Class II modification III with 50% and Class III modification I with 47.9%, Class II modification III with 50% and Class III modification I with 47.5%. It was concluded that the most frequent Kennedy class was Class III in both the upper and lower jaw, also being more frequent in the male and female genders.<sup>2</sup> Zambrano, Christel In her 2016 graduation work she carried out a descriptive analytical study of cross-sectional observational type with a universe of 156 patients, of these a sample of 116 male and female patients was obtained who presented partial edentulism in an age range from 22 to 50 years or more who attended the dental office of the Jacobo and Maria Elena Ratinoff Day Hospital. The results of the study showed that out of a universe of 154 patients obtained attending the dental consultation at the Jacobo & Maria Elena Ratinoff Day Hospital, 75% 116 patients were partially edentulous and 25% were non-partially edentulous. 72% of the sample of 116 partially edentulous patients were female patients and 38% were male. Within the female gender 76% were partially edentulous females and within the male gender 73% were partially edentulous males. Class III modification I prevailed in both jaws, there was a higher prevalence of partial edentulism in the lower jaw, however, in the upper jaw there was a higher prevalence of tooth loss, and the older age range 50 and over presented a higher percentage of partial edentulism. Padilla, Maria et al. in Mexico In their article "Dentition status and its impact on quality of life in older adults" (2017) conducted a descriptive cross-sectional study in AM students at the University of the Third Age in Mexico City.

The sample size was calculated based on descriptive studies with a population size of 250 people. An identification form was used to obtain personal data and comorbidities, in addition to a clinical evaluation of the oral cavity by means of the CPOD register, and the evaluation of edentulism and prosthetic load. In relation to the state of the dentition, the mean CPOD index was  $1.04 \pm 1.47$  CI95% 0.75-1.33 for decayed teeth,  $7.9 \pm 7.3$  CI95% 6.43-9.37 for missing teeth,  $4.9 \pm 4.2$  CI95% 4.13-5.81 for filled teeth. The mean of the total CPOD index was 0.497. For edentulism a percentage of 87% of partial edentulism was obtained, 12% of total edentulism.<sup>10</sup> Gonzalez, Cristina In her research "prevalence of partial edentulism according to the Kennedy classification. ucsg dental clinic. 2015" her objective was to determine the prevalence of the type of partial edentulism according to the Kennedy classification in the UCSG dental clinic. A descriptive type of research was carried out, where the medical records of the patients were examined to determine what type of edentulism according to Kennedy the patients had in 2015. Of the 205 records reviewed, it was observed that in the upper jaw, class III was the most prevalent with 38%, followed by class II with 32%, and in the lower jaw, class II was most prevalent with 33% followed by class I with 30%.<sup>11</sup> 4

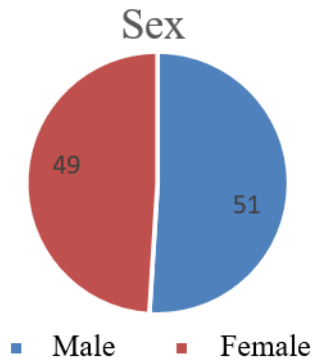
## Methodology

The study design was observational, descriptive and cross-sectional, and was carried out at the Universidad Autónoma de Campeche, in the clinics of the Faculty of Dentistry. The sample was obtained using the finite sample size formula with a total of 100 subjects.

## Results

Of the study population of subjects  $n=100$ , 51% were male and 49% were female. The mean age was 59 years with a standard deviation of 11 and a range of 53. With respect to the variable school grade level, the majority only studied secondary school 50% followed by primary school 30%, high school 15%, university 5%. The distribution of the prevalence of partial edentulism with respect to sex, where Kennedy class II prevails in males with 21%. This was followed by class I in males with 10%, class III in females with 18% and finally class IV, also prevalent in females with 12%.

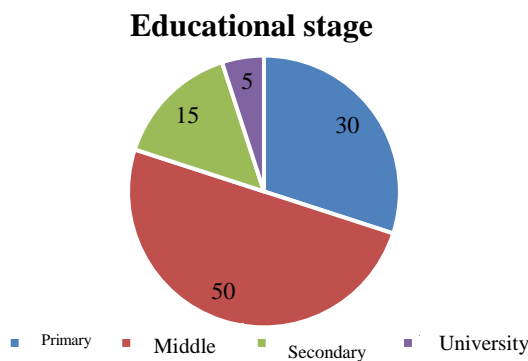




Graphic 1

Partial Edentulism	Male	Female
Class I	10 %	7 %
Class II	21 %	12 %
Class III	12 %	18 %
Class IV	8 %	12 %
Total	51 %	49 %

Table 1



Graphic 2

**Conclusion**

This study shows that the patients attending the Faculty of Dentistry demonstrated that Kennedy Class II is the one that obtained the best results in the male sex, while in Kennedy Class III the female sex stood out as the majority in the population studied. It is worth mentioning that these patients are studied with different age ranges, as well as schooling.

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