



## LIFESTYLE AS PREVENTION AGAINST CHRONIC NONCOMMUNICABLE DISEASES IN ELDERLY ADULTS IN THE RURAL AREA

### Epidemiology

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### ABSTRACT

**INTRODUCCTION** The senior adults (SA) that live in the Reyes Metzontla, Tehuacán, Puebla Mexico (RM.ThP.M) present a healthy lifestyle, according to the definition of World Health Organization (WHO). **METHODS:** Cross-sectional, observational, analytical study, sample of 110 SA, both genders, age 65/75 years old. The patients of the RMThP.M community were followed up, period 2014/2016. A semi-structured interview was conducted and applied to each patient to identify their healthy lifestyle or not; general and oral clinical history, blood glucose sampling, serial blood pressure measurement, informed consent signature. **RESULTS:** Out of 110 SA, 46% are healthy, 46% have chronic noncommunicable diseases (Diabetes and hypertension). Regarding oral health state, 11% present hyposalivation, 14% xerostomy. 33% was diagnosed with decay. 13% with decay presence are male. When the diagnosis was done, 63% presented light periodontal condition, only 25% of total population kept the condition after post operative prophylactic treatment.

**CONCLUSIÓN:** rate DLO-D overflows the established interval by WHO, with a possible influence of: consuming junk food, soda, eating continuously, occasional, never or urgent dental consulting, poor brushing techniques.

### KEYWORDS

older adults, lifestyle, caries, periodontal disease.

### INTRODUCTION

In recent years, there has been a sustained worldwide trend towards an increase in life expectancy at birth and a percentage increase in the population aged 60 and above. According to the World Health Organization (WHO) in 2002, there were 600 million senior adults (SA) in the world, a figure that would double by 2025, by 2050 they could reach 2 billion people, most of them living in developing countries. Internationally, it has been defined that SA is every person who has reached the age of 60, with no difference in sex. The SA in Mexico is on the rise as in the rest of the world, as well as chronic noncommunicable diseases that require attention<sup>1</sup>.

This indicates planning an improvement in many aspects, so it is important to consider what is being done to make this increase in life expectancy consistent, to maintain a healthy lifestyle? and that is related to the intellectual, social, biological and material resources accumulated during the life cycle.

In this context, we must first remember what health is. The WHO defines it as "a state of complete physical, mental and social well-being", which means that this concept goes beyond the existence or not of one or another disease. Consequently, more than talking about a healthy lifestyle, we must discuss a healthy lifestyle, including chewing, nutrition, physical exercise, health prevention, work, relationship with the environment and social activities<sup>2</sup>.

The SA that live in the Reyes Metzontla, Tehuacán, Puebla Mexico (RM.ThP.M) present a healthy lifestyle, according to the definition of WHO.

Considering the previous, the objective to follow is to expose SA lifestyle community of R.M. ThP.M as a protection factor against noncommunicable Diseases and oral diseases with this make young people aware and adults continue with the lifestyle of mentioned population and in this way improve the conditions of life of future generations.

When we mention the life style of the elderly adults reference is made to the personal satisfaction with the general state of health of the patient and their social environment.

The concept has suffered various transformations refers to a dynamic process that has involved in a sociological and psicosociological<sup>3</sup>.

The quality of life according to Tieska Molina<sup>4</sup> defined as a construct as a complex, multifactorial, where you agree what there is a duality of subjective, the first one makes reference to the concept of well-being or satisfaction with life style to what is called happiness, feeling of satisfaction and positive mood, and the second one related to aspects of social functioning and physical and psychic being the interaction between the two that determines the quality of life, "welfare state".

For the WHO quality of life is: the perception that an individual has of its place in existence and the systems of values in which it lives, the context of culture and the relation to their objectives, expectations, standards and concerns.

It's a broad concept, to Fernandez Ballesteros (2013), mentioned that is influenced by the physical health of the subject, essential of their environment<sup>5</sup>.

Vinaccia and Orozco (2005) consider lifestyle can be translated in terms of subjective level and in terms of objective indicators<sup>4</sup>.

Therefore, of the above considerations, and analyzing the concepts of the different authors it is pertinent to assess to SA in 5 key aspects, physical health, mental health, socioeconomic level, circumstances of the environment and functional status.

On the specific points relating to the physical health and functional status its joined the oral health. Wich are inherent and significant aspects of the general health, and directly influence in lifestyle of SA.

When SA begins to struggle with illnesses such as arthritis, stroke, cancer, diabetes, hypertension, and autoimmune disorders interfere with mouth care, chewing and the use of dental prostheses, in addition to increasing the risk of tooth decay and periodontal diseases, infections by opportunistic organisms, and dryness of the mouth, so in the same way, oral diseases affect the general health of the individual wich leads physiological consequences, because it can get to the malnutrition and affect interpersonal relationship and mental health and interferes in the lifestyle of the elderly adult.

Its important to indicate that some oral changes, it can a result of diseases such as periodontitis, secondary actions by consumption of drugs, effects of socio-cultural and economic factors.

In this sense, the changes in the mouth related with the age, may have two origins as an expression of aging or as a result of internal physiological factors that do not cause disease but induce biochemical, functional and structural changes.

Therefore, when we talk about healthy life, it is necessary to talk about healthy lifestyle including the oral cavity wich is part of the diet that includes a good chewing, swallowing and digestion.

The oral cavity is part of the estomatognathic system, defined as the group of organs that help chewing, deglutition, and phonation, formed by muscles, tongue, tooth, bones, joints, head and neck<sup>7</sup>.

The study of theorofacial aging, until 70 years is limited to the loss teeth<sup>8,9</sup>. By keeping more teeth, the range of problems associated with aging, it is more varied, such as cavities and periodontal disease. More conditions may occur other conditions such as burning in the mouth, xerostomia, halitosis, mycosis, bone reabsorption of the jaws, taste disorders, pathologies associates with removable prostheses among others<sup>7</sup>.

The aging process is irreversible, in oral and periodontal tissues changes are observed in the skin, the sweat glands atrophy, in the bone tissue the processes of resorption predominate, there are changes in the salivary function in quantity as in quality what allows the high incidence of cavities, and tooth loss due to severe periodontal disease generating alterations in terms of eating habits for not being able to chew.

The bad eating habits not only cause organic, systemic, endocrine and metabolic pathologies, they also produce alterations in the oral cavity. A balanced diet that contains the essential nutrients for the good functioning of the organism.

In the SA the periodontopathies are the most frequent cause of tooth loss what affects the quality of life; there are controversial opinions regarding its appearance, many authors suggest that it is a process that occurs as you get older, and others point out factors such a poor oral hygiene or the existence of systemic diseases such as Diabetes Mellitus<sup>10,11</sup>.

The periodontium can react to the aging process if there is little oral hygiene or bad brushing technique. The accumulation of dentobacterial plaque causes gingivitis and over time gingival retraction at the level of the neck of the tooth discovering the tooth and affecting the dental cement, if this process advances it causes a periodontitis, generating bone loss also there may be higher incidence of cavity at the cervical level. Cavity is a multifactorial disease wich constitutes a public health problem, because of its magnitude causes pain, alimentary and digestive difficulties, phonation modifications, psychological conditions due to the lack of aesthetics, and a expensive treatment.

Katz mentions: cavities is a disease characterized by a series of chemical and microbiological complex wich brings as a result the complete destruction of the tooth if the process advanced without restriction<sup>12</sup>.

The SA are at risk of cavities or suffer xerostomy wich is a disorder due to lack of saliva, or for the use of drugs, and by radiotherapy, chemotherapy treatments<sup>13</sup>.

Regarding salivary function, there is a more relevant change in salivary flow speed after menopause. The salivary flux decrease is not reduced until being to 60 years old. Salivary flux decrease, affects phonetically and can make difficult swallowing nourishing. As mentioned before, to some reserches, it can be ageing or medication product (antihypertensive, anticholinergic, psychotropic and sedative).

Among other authors like Scott who has described the existence of glandular morphological changes which tissue is replaced by adipose or connective tissue so far<sup>10</sup>. Now, if salivary flux is reduced according to aging, it may be limited but without any clinical relevance, so when an SA shows xerostomia symptoms, this should not be considered a consequence of aging process, but it is in fact, necessary to evaluate general, oral and pharmacological condition to diagnosis saliva hypofunction cause these changes in salivary function can be presented meanwhile quantity as quality<sup>14</sup> and in some cases it is the result of a few ingestion of water during a day. The aforementioned changes alter the chewing of the food bolus inviting the AM to decrease and change the type of food.

**MATERIALS AND METHODS:** Results were captured in a Microsoft Excel data base for Windows, data was processed, using descriptive and inferencial statistic.

Study design: observational, analytical, sample of 110 older adults, both sex, of which 55% are women and 45% men, 65 to 75 years old, who belong to the "65 and over" program. The patients of the Reyes Metzontla community, Tehuacán Puebla, were followed up during the period 2014 spring, 2016 spring.

A general and oral clinical history (CH) has been done, blood glucose sampling was performed with a glucometer, a serial blood pressure sampling taken by consent signaturing inform following Helsinki guidelines and with CH Data and also a semi structured interview to report day a day story to each AM allowed us to identify their lifestyle (such as physical and mental health, socioeconomic status, environmental circumstance and general function status)

## RESULTS

Among 110 AM, 46% of them are healthy AM; and the 46% present chronic non transferable.

Disease with Diabetes prevailing (11%) hypertension (15%) or both (20%) correspond to male sex for both medical condition, from which one patient presents slight cognitive impairment (0.09%) and two of the present gastitis (0.18%). There are some other medical condition na less percentage (see Graph1) systemic condition described before area risking factor to develop any bucal pathology, which does not exempt healthy people to have a risk to present them too.

Regarding oral health state, 11% present hyposalivation, 14% xerostomy that allows food bolus to have a better mixing and present better deglutition and digestion. 33% was diagnosed with decay in which female sex predominate with 23% of total women population who are the most affected among all bucal affections mentione. (see table1) 13% with decay presence are male. 24% of total AM present dental abrasion due to food consistency when the diagnosys was done, 63% presented light periodontal condition, only 25% of total population kept the condition after post operatory prophylactic treatment.

## DISCUSSION

The sex variable is recognized, Cepero Santos<sup>15</sup> identified in women at increased risk of early way that is related to establishing patterns chronology of tooth eruption, starts earlier in females than males, a factor which coincides with the study this high incidence results in a public health problem.

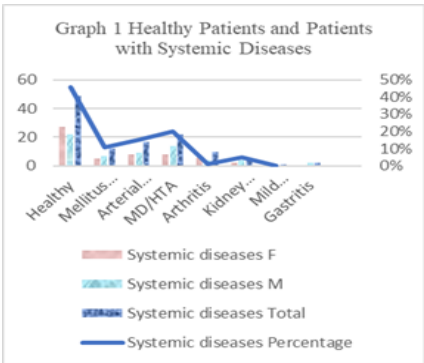


Table 1DIAGNOSED MOUTH CONDITIONS

AFFECTIONS	F	M	Total	percentage
Halitosis	29	20	43	39%
Hyposalivation	9	3	12	11%
Xerostomia	11	5	16	14%
Dental caries	23	13	36	33%
Dental abrasion	14	13	27	24%
Malocclusion	8	5	13	12%
Radicular Remains	1	0	1	0%
periodontal disease	37	33	70	63%
Edentulism	12	4	16	14%
Burning Mouth	1	1	2	1%
Angular Cheilitis	1	2	3	2%

Regarding diet, it is considered one of the most relevant risk factors for the establishment of Dental caries, an association that has been clearly demonstrated by Poulsen, Raadal and Douglass<sup>16</sup> and that coincides according to the detected results. Interviewing healthy SA, they referred to organic nutrition, serene life, without medical or dental check-ups since they do not consider it necessary. SA patients with chronic diseases have a hereditary history of chronic noncommunicable diseases; they do not go to medical or dental checkpoints because of the distance from the health center and costs that are not accessible to them, when they face some "common" disease (diarrhea, colds, dental pain) they use herbs as a cure, they only go when they show some seriousness (severe pain, fractures, hemorrhage)

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