

Periodontal conditions and treatment needs, by CPITN, in the 35-44 and 65-74 year-old population in Santiago, Chile

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Summary

A CPITN survey involving Chileans aged 35-44 and 65-74 was conducted. A random, stratified sample by age, gender, socio-economic status and educational level was obtained, comprising 1150 individuals. Prevalence of chronic inflammatory periodontal disease (Codes 3+4) was 90.89 per cent in subjects aged 35-44, and 100 per cent in subjects aged 65-74. The total prevalence for both age cohorts was 92.19 per cent. Prevalence of periodontal disease was slightly lower in females but severity was significantly higher in males. A significant association between socio-economic status and periodontal health was found. Prevalence (Code 3+4) was 56.44 per cent in subjects of high, 98 per cent in subjects of middle, and 100 per cent in subjects of low socio-economic status. Also, the mean number of sextants with pockets > 6mm (1.12) and mean number of excluded sextants (1.43) were significantly higher in subjects of low socio-economic status. An association between educational level and periodontal health was apparent. The only subjects who were periodontally healthy were in the group with university education. Prevalence of CPITN (Code 3+4) was also significantly lower in subjects with university education. There was also a significant association between educational level and loss of teeth. Concerning missing teeth, 22 per cent were lost due to periodontal disease and 77 per cent due to caries. The prevalence of periodontal disease found in this adult representative Chilean population indicates that the entire population needs oral hygiene instruction and scaling, and that 45.70 per cent need complex periodontal treatment.

Oral health survey data are essential for governmental decisions about dental care and prevention programmes. Data on periodontal conditions in adults in Chile are scarce. The present survey was undertaken to assess the periodontal treatment needs of the adult population of the Metropolitan Region in Chile, employing the CPITN to analyse periodontal status by demographic variables, and to calculate treatment needed for this population.

Materials and methods

Sampling and sample sizes

The Chilean population is 13,425,320, of which 5,257,937 reside in the Metropolitan Region, which includes the

capital city and another 22 districts. The urban population constitutes 96.52 per cent of the Metropolitan Region population¹. The study population consisted of subjects aged 35-44 and 65-74. The total population of these age groups was 625,844 in the Metropolitan Region, in 1995¹. These two age groups were selected because they were the adult population groups recommended by the WHO for oral health surveys². The study sample was calculated according to the method described by Cochran³ at 95 per cent confidence intervals with a 0.03 per cent range of error, and consisted of 510 randomly selected households with 1150 individuals aged 35-44, and 65-74. The participants in the study were selected using a multi-staged probability sample covering the 23 districts of the Metropolitan Region. Districts were clustered according to the socio-economic

level of the majority of the population in the district. The first stage randomly sampled 11 districts of the Metropolitan Region: four districts with dwellers of predominantly low socio-economic status, four districts with a majority of medium socio-economic status subjects, and three districts with dwellers mainly of high socio-economic status. The population of each district was stratified according to age in order to determine the number of subjects that had to be selected in every district. Using a map of the districts, five blocks of households were randomly selected in every district. A random method was used to select the household in each block to be surveyed in the first place. The household of every block that was surveyed in the first place was randomly selected, and the other households were selected following counter clockwise.

In the second stage of the sampling design, a personal interview and self-administered questionnaire were conducted with the selected sampled families to obtain socio-demographic and family income information. Interviews were conducted by a well-trained social worker. At the interview, all family members aged 35-44, and 65-74 were invited to participate in an oral health survey, and they were given an appointment to attend the dental clinic of the Public Dental Service nearest their home. The households in every district were surveyed until the number of subjects aged 35-44, and 65-74 for every socio-economic group of the sample was reached. The study population consisted of a stratified, randomly selected sample of 1096 subjects, 428 males and 451 females aged 35-44 (78 per cent), and 88 males and 129 females aged 65-74 (22 per cent). The selected subjects were divided into three socio-economic status groups according to family income, using the criteria of the CASEN survey of the Planification and Co-operation Ministry of the Chilean Government⁴. In addition, persons were classified by the following four educational level groups: university education, high school education, basic school education, and without formal education.

Examiner

The CPITN index⁵ was used to record periodontal conditions and treatment needs. The examination was carried out by only one well-trained and calibrated examiner (JG). On successive days groups of 20 subjects were examined who had the full range of periodontal conditions expected to be assessed during the survey. Examinations of the subjects were repeated until acceptable consistency was achieved. Results for the variables of CPITN assessed were between 0.80 and 1.00 for codes 0, 1, and 2, and between 0.61 and 0.80 for codes 3 and 4, as assessed by Kappa statistic. The examiner reliability achieved was in the range considered to be good to excellent as assessed by Kappa statistic⁶. Clinical examinations were carried out in dental clinic settings, and included periodontal assessment according to CPITN,

using the specially designed WHO 621 periodontal probe (Morita, Japan). Six sextants were evaluated for each person according to the following index teeth: 17, 16; 11; 26, 27; 37, 36; 31; 46, 47. All the index teeth were examined at six sites per tooth (mesiobuccal, buccal, distobuccal, distolingual, lingual and mesiolingual) to determine the presence of one of the following: pockets 6mm or deeper, pockets 4-5mm, supra or subgingival calculus or overhanging fillings, gingival bleeding, or no clinical signs of disease. The worst finding for the index teeth was recorded for the sextant. When less than two functional teeth were present, the sextant was defined as edentulous. If the index teeth in a particular sextant were missing, all remaining teeth in that sextant were examined⁵. For the anterior maxillary sextant, if tooth 11 was missing, tooth 21 was examined. If both teeth 11 and 21 were missing, all remaining teeth in that sextant were examined⁷. Missing teeth and teeth needing extraction were assessed to determine frequency of extraction for periodontal and caries reasons. The cause for extraction of missing teeth was determined by asking the examinee. The results were analysed according to the percentage of persons with the highest CPITN scores and according to the mean number of sextants per person assigned to each of the CPITN categories and the four treatment groups.

After the data of dentate subjects were processed, they were analysed for age, gender, socio-economic status, and educational level. Number of sextants by CPITN score was also analysed for association with age, gender, socio-economic status and level of education. Statistical analysis of the results was performed using chi-square. Level of statistical significance was chosen at $P < 0.05$. The criteria recommended by Ainamo *et al.*⁵ to determine the periodontal treatment requirements were used as follows: Treatment Need 0: no need for treatment, Treatment Need 1: require at least oral hygiene instruction, Treatment Need 2: require scaling and removal of plaque retentive factors, and Treatment Need 3: require complex periodontal treatment.

Results

Of the persons invited for oral examinations 4.5 per cent did not attend, and almost all of those were in the high socio-economic status group. All those persons were replaced by members of additional households selected by the method previously described.

Age

Table 1 shows the distribution of sample subjects by age and socio-economic status. Of 1096 subjects participating in the survey, 26 males (5 per cent) and 45 females (7.7 per cent) were found to be edentulous and excluded from the study.

Table 2 shows the percentage distribution of subjects

Table 1 Distribution of the study sample by age and socio-economic status.

Age	Socio-economic status						Total	
	Low		Medium		High		N	%
	N	%	N	%	N	%	N	%
35-44	468	53.2	266	30.20	145	16.5	879	100
65-74	152	70.0	43	19.81	22	10.1	217	100
Total	620	56.5	309	28.10	167	15.2	1096	100

Table 2 Percentage distribution of subjects aged 35-44 and 65-74 according to highest CPITN score, and mean number of sextants affected per subject.

Age	No examined	Subjects with teeth	Percent of subjects coded, and (mean number of sextants affected per subject)					
			0 No periodontal disease	1 Bleeding	2 Calculus	3 Pockets depth 4-6 mm	4 Pockets depth >6 mm	X Excluded, less than 2 teeth
35-44	879	878	1.25 (0.08)	2.96 (0.67)	4.90 (1.54)	50.23* (2.12)	40.66f (0.80)	(0.79)†
65-74	217	147	0.00 (0.06)	0.00 (0.14)	0.00 (0.30)	28.57* (1.32)	71.43f (1.31)	(2.87)†
Total	1096	1025	1.07 (0.08)	2.54 (0.60)	4.20 (1.36)	47.12 (2.01)	45.07 (0.87)	(1.09)

* Subjects aged 35-44 versus subjects aged 65-74 ($P=0.0002$)f Subjects aged 35-44 versus subjects aged 65-74 ($P=0.0002$)† Subjects aged 35-44 versus subjects aged 65-74 ($P=0.025$)**Table 3** Percentage distribution of subjects according to highest CPITN score and sex, and mean number of sextants affected per subject.

Gender	No examined	Subjects with teeth	Percent of subjects coded, and (mean number of sextants affected per subject)					
			0 Healthy	1 Bleeding	2 Calculus	3 Pockets depth 4-6 mm	4 Pockets depth >6 mm	X Excluded
Male	516	490	0.61 (0.06)	2.25 (0.50)	4.08 (1.18)	38.77* (2.06)	54.29† (1.12)	(1.30)
Female	580	535	1.50 (0.08)	2.80 (0.62)	4.29 (1.43)	54.77* (2.16)	36.64† (0.73)	(0.98)
Total	1096	1025	1.07 (0.08)	2.54 (0.60)	4.20 (1.36)	47.12 (2.01)	45.07 (0.87)	(1.09)

* Male with pockets 4-6 mm versus female with pockets 4-6 mm ($P=0.0002$)† Male with pockets > 6 mm versus female with pockets > 6 mm ($P=0.0002$)

according to highest CPITN score and age, and mean number of sextants affected per subject. Of the 1025 dentate subjects, only 1.25 per cent were found with healthy periodontium, and all of them were 35-44 years-old. The proportion of subjects, the mean number of sextants with pockets >6 mm, and the mean number of excluded sextants (less than 2 teeth) were significantly higher in subjects aged 65-74 ($P<0.05$). The prevalence of periodontal disease (Codes 3+4) was 90.9 per cent in subjects aged 35-44 years, and 100 per cent in subjects aged 65-74 years.

Gender

Table 3 shows the distribution of subjects according to highest CPITN score and gender. More females (1.5 per cent) than males (0.61 per cent) were periodontally healthy, and the prevalence of periodontal disease (Code 3+4) was slightly higher in males (93 per cent) than in females (91.41 per cent), but these differences were not significant. A higher percentage of females than males had pockets 4-6mm, and this difference was statistically

significant ($P=0.0002$), even though the mean of sextants affected per subject was similar in both genders. The proportion of subjects with pockets >6mm, and the mean number of sextants with pockets >6mm per subject were also higher in males than in females ($P=0.0002$).

Socio-economic status

Table 4 shows the periodontal conditions of subjects of the three socio-economic status groups according to CPITN categories. Each subject was included in only one category based on the highest periodontal condition found in their sextants. The prevalence of periodontal disease (Codes 3+4) in subjects of low socio-economic status (99.47 per cent) and in subjects of middle socio-economic status (98 per cent) was similar. Periodontally healthy subjects were found only within the high socio-economic group, and subjects of this group had significantly lower prevalence (56.44 per cent), and severity of periodontal disease than both the other socio-economic groups ($P=0.0002$).

Table 4 Percentage distribution of subjects aged 35–44 and 65–74 according to highest CPITN score and socio-economic status, and mean number of sextants affected per subject.

Socio-economic status	No examined	Subjects with teeth	Percent of subjects coded, and (mean number of sextants affected per subject)					X Excluded, less than 2 teeth
			0 Healthy	1 Bleeding	2 Calculus	3 Pockets depth 4–6 mm	4 Pockets depth >6 mm	
High	167	163	6.75 (0.34)	15.85 (1.27)	20.86 (1.89)	41.10 ⁺ (1.10)	15.34 ^f (0.64)	(0.76)
Middle	313	300	0.00 (0.06)	0.00 (0.48)	2.00 (1.83)	66.33* ⁺ (2.47)	31.66 ^f (0.54)	(0.62)
Low	616	562	0.00 (0.01)	0.00 (0.46)	0.53 (0.96)	38.61* (2.02)	60.86 ^f (1.12)	(1.43)
Total	1096	1025	1.07 (0.08)	2.54 (0.60)	4.20 (1.36)	47.12 (2.01)	45.07 (0.87)	(1.09)

* Subjects of middle socio-economic status with pockets 4–6 mm versus subjects of low socio-economic status ($P=0.0002$)

† Subjects of high socio-economic status with pockets 4–6 mm versus subjects of middle socio-economic status ($P=0.0002$)

f Subjects of high socio-economic status with pockets >6 mm versus subjects of middle and low socio-economic status ($P=0.0002$)

Table 5 Percentage distribution of subjects according to highest CPITN score, educational level, and mean number of sextants affected per subject.

Educational level	No examined	Subjects with teeth	Percent of subjects coded, and (mean number of sextants affected per subject)					X Excluded < 2 teeth
			0 Healthy	1 Bleeding	2 Calculus	3 Pockets depth 4–6 mm	4 Pockets depth >6 mm	
1	93	93	11.83 (0.38)	19.36 (0.56)	24.73 (1.90)	26.88 (1.13)*	17.20 (0.35)#	(1.30)
2	401	397	0.00 (0.04)	20.20 (0.97)	4.78 (1.77)	68.26 (2.41)* ^f †	24.94 (0.65)#	(0.40)
3	526	484	0.00 (0.01)	0.00 (0.40)	0.21 (1.00)	35.74 (2.05) ^f	64.05 (1.21)	(1.33)
4	76	51	0.00 (0.03)	0.00 (0.17)	0.00 (0.49)	27.45 (1.80)†	72.55 (1.80)	(1.71)
Total	1096	1025	1.07 (0.08)	2.54 (0.60)	4.20 (1.36)	47.12 (2.01)	45.07 (0.87)	(1.07)

1: University education 2: High school 3: Basic school 4: Without education

* Subjects with university education versus subjects with high school education ($P=0.0002$)

f Subjects with high school education versus subjects with basic school education ($P=0.0002$)

† Subjects with university education versus subjects with basic school education ($P=0.001$)

Subjects with university education and subjects with high school education versus subjects with basic school education and subject without formal education ($P=0.0002$)

Educational level

Of the subjects surveyed, 7 per cent had no formal education, 48 per cent had only basic school education, 37 per cent had high school education, and 8 per cent had university education. An association between periodontal health and educational level was apparent. The data in Table 5 demonstrate that periodontally healthy subjects were only in the group with university education. The prevalence of periodontal disease (Code 3+4) was 44 per cent in subjects with university education, 93 per cent in subjects with high school education, and almost 100 per cent in subjects with basic school education, and without formal education. All these differences were statistically significant ($P=0.001$). The severity of periodontal disease, as determined by the mean of sextants with pockets >6 mm per subject, was also associated with educational level.

Missing teeth

Seventy seven per cent of missing teeth were extracted due to caries, and 22 per cent of teeth were lost due to periodontal disease. The mean number of missing teeth increased from 6.62 for the 35–44 year group, to 12.29 for the 65–74 year group, and this difference was statistically significant ($P<0.05$). Mean number of missing teeth

was 8.21 for persons of low socio-economic status, 6.0 for persons of middle socio-economic status, and 3.83 for persons of high socio-economic status. Differences compromising the low socio-economic status group with the other two groups were statistically significant ($P<0.05$).

Periodontal Treatment Need

The eleven subjects (1.07 per cent of the sample) who each demonstrated six healthy sextants (CPITN 0), were defined as not requiring periodontal treatment. The 1014 remaining subjects (98.93 per cent) were defined as TN 1 (Treatment Need 1), requiring at least oral hygiene instruction. The mean number of sextants in CPITN categories 2 and 3, or TN 2 (scaling) was 3.37, and a mean of 0.87 sextants scored CPITN 4 or TN 3 (complex periodontal treatment) (Table 6). The FDI and WHO have suggested that about 30 minutes are required for oral hygiene instruction (TN 1), 20 minutes for scaling (TN 2) per sextant, and 40 minutes for complex therapy (TN 3) per sextant. Therefore, it can be estimated that, on the basis of the dentate persons of the sample, 507 hours would be required for oral hygiene instruction ($98.93\% \times 1025 \times 0.5$), in the TN 2 category, 1128 hours ($3.37 \times 1014 \times 0.33$) and for TN 3, 582 hours ($0.87 \times 1014 \times 0.66$).

Table 6 Periodontal treatment needs of subjects aged 35-44 and 65-74.

Age	No of dentate subjects	% TN0	% TN1	% TN2 (mean number of sextants)	% TN3 (mean number of sextants)
35-44	878	1.25	98.75	98.75 (3.66)	40.66* (0.80)
65-74	147	0.00	100	100 (1.62)	71.43* (1.31)
Total	1025	1.07	98.93	98.93 (3.37)	45.70 (0.87)

* Subjects aged 35-44 versus subjects aged 65-74 ($P=0.0002$)

For comprehensive periodontal care of the sampled subjects, therefore, 2217 hours, or about 2.18 hours per person would be required. If these results are extrapolated to the total population aged 35-44 and 65-74 of the Chilean Metropolitan Region affected by periodontal disease, amounting to 619,147 subjects (98.93% of 625,844), about 1,350,000 hours would be required for basic periodontal care.

Discussion

This survey has provided valuable data concerning adult periodontal status in Chile. Although the persons surveyed in the present study do not represent the total adult Chilean population aged 35-44 and 65-74, the sample selected did represent the total population of these two age groups of the Metropolitan Region, which amounts to 39 per cent of the total Chilean population.

The 35-44 and 65-74 age groups have been chosen as key groups by the WHO for oral health surveys². The 35-44 age group is the standard monitoring group for oral health conditions of adults, because the level of severe periodontal involvement and general effects of care provided can be monitored using data for this age group. The 65-74 age group is very important because data from this group are needed both for planning appropriate care for the elderly and for monitoring the long term effects of oral care services².

Although many limitations of the CPITN as an indicator of periodontal conditions have been identified^{8,9}, this index has been widely used for epidemiological purposes, and the WHO Global Oral Data Bank contains extensive CPITN data from many countries¹⁰⁻¹³. The use of index teeth is one of the weaknesses of the CPITN that may lead to an underestimation of adult subjects and sextants identified with shallow and deep pockets, and an overestimation of those considered healthy³. These deficiencies can be compensated by conducting full mouth examinations of 5 or 10 per cent of survey subjects. As this procedure was not done in the present study, it is convenient to consider this weakness in the analysis of the results. However, as prevalence of healthy sextants was 1.07 percent, and only 1.25 per cent of subjects were found with healthy periodontium, any overestimation of healthy sextants due to the use of index teeth may be of very low significance in the results of this study. However, an underestimation of deep pockets may have been possible.

CPITN is an internationally established method of

estimating levels of periodontal conditions in populations, and has therefore made possible comparisons of results of epidemiological studies performed in different countries. The results of the current study indicated that periodontal conditions in the Chilean adult population are poorer than those of other developing countries. A review of CPITN data for the age group 35-44 in the WHO Global Oral Data showed that calculus and shallow pockets were the most frequently found conditions. However, the percentage of subjects and the mean number of sextants per subject with deep pockets were from small to very small ranging from 5-20 per cent of the population so affected. In the current study, the prevalence of chronic inflammatory periodontal disease for the age cohort 35-44 was 92.19 per cent, which is higher than the figures reported for many other developing countries¹¹, and much higher than the prevalence in developed countries, in which the range is between 25 and 80 per cent¹¹. The proportion of subjects aged 35-44, and the mean number of sextants with pockets >6mm per subject was also higher than in the majority of European, African, south-east Asian, eastern Mediterranean and western Pacific countries. In comparison with other countries of the Americas, the Chilean population also shows a higher prevalence of periodontal disease (Code 3+4), and a higher percentage of persons with sextants with > 6mm pocket¹¹.

The prevalence of periodontal disease for the age cohort 65-74 in Chileans was 100 per cent, which is slightly higher than in Germany, some countries of the ex-USSR such as Estonia and Turkmenistan, and ex-Yugoslavia¹². The mean number of sextants with pockets >6mm in the Chilean older age cohort, as well as the mean number of sextants with less than two teeth was also higher than in 9 of the 11 countries of the WHO Global Oral Data Bank for age 65-74 persons¹².

A wide range of demographic factors, such as age, gender, place of residence, educational level and socio-economic factors, have been identified as associated with chronic inflammatory diseases¹⁴⁻¹⁶. In the current study, the prevalence and severity of periodontal disease increased with age, as has been found in many studies. Most epidemiological studies showed that periodontal disease is more severe in elderly people because of cumulative tissue destruction rather than an age-related, intrinsic abnormality¹⁷⁻²¹.

Periodontal disease is often reported in epidemiological studies to be more prevalent and severe in males than in females at comparable ages²²⁻²⁴, and similar results were found in the Chilean population.

The relationship of socio-economic status to periodontal disease is usually viewed globally, comparing populations of industrialised countries with those of non-industrialised countries^{14,25}. However, the assumed differences between industrialised and non-industrialised countries with regard to periodontal health were not reflected in the survey data examined by Miyazaki *et al.*¹¹ and by Pilot *et al.*¹². Almost none of the epidemiological studies to determine periodontal conditions in different countries evaluated the socio-economic status of the population surveyed. Sampling methods to get a true randomised and representative sample of the adult population for oral epidemiological studies are well described in the literature. However, a difficult problem to solve is obtaining collaboration of subjects of all the socio-economic groups that comprise the study population. Persons of low socio-economic status seem to be more willing to participate in epidemiological surveys than persons of higher socio-economic status, as was found in the current study. It can thus be hypothesised that the majority of persons usually examined in epidemiological studies may be of low socio-economic status, and this may be one of the reasons why the periodontal health differences between industrialised and non-industrialised countries are not reflected in the WHO Global Oral Data Bank as examined by Miyazaki *et al.*¹¹ and by Pilot *et al.*¹². Chronic inflammatory disease is more severe in low income, less well educated people than in higher socio-economic groups²⁷. Few epidemiological surveys have studied the association between socio-economic status and periodontal disease in populations of similar ethnic characteristics, and in some of those studies there was little variation in the socio-economic status of the population studied²³. Epidemiological data of the current study showed a clear relationship between socio-economic status and periodontal disease. Prevalence and severity of periodontal disease was significantly lower in persons of high socio-

economic status than in persons of the same age of middle and low socio-economic status. It is generally accepted that health is strongly influenced by socio-economic factors. Good periodontal health has generally been associated with high level of education, high social class, and high incomes^{14-16,26-29}, and all of these variables are closely associated with each other in the concept of 'lifestyle'. It has been shown that lifestyle affects health, and conversely, that the lifestyle of an individual often defines his or her dental health behaviour³⁰⁻³³.

The level of education was also clearly associated with periodontal disease in Chilean adults. Periodontally healthy persons were found only in the group with university education, and the prevalence of periodontal disease (code 3+4), as well as the prevalence of sextants with pockets >6mm was significantly lower in persons with the highest educational level than in persons with less years of education. The results of the current study indicated that the prevalence and severity of periodontal disease in the adult Chilean population are quite high, and the needs for periodontal treatment of that population are almost impossible to accomplish because the demands on professional and economic resources are more than the country can currently manage. A pragmatic objective of treatment of the middle-aged and elderly Chilean population would be the control of periodontal disease to the extent that some or most of the teeth could be preserved throughout life. The main emphasis should be on the application of preventive measures in school children, teenagers and young adults so they can reach older age periodontally healthier than the current generations.

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La situation parodontale et les besoins en soins, par le CPITN, chez les 35-44 ans et les 65-74 ans à Santiago, Chili

Résumé

Une étude du CPITN a été effectuée sur des chiliens âgés de 35 à 44 ans et de 65 à 74 ans. Un échantillonnage aléatoire, répertorié en fonction de l'âge, du sexe, du statut socio-économique et du niveau d'éducation a été constitué et comportait 1150 individus. La prévalence des parodontopathies chroniques et inflammatoires (Code 3+4) était de 90,89% chez les sujets âgés de 35 à 44 ans et de 100% sur les sujets âgés de 65 à 74 ans. La prévalence globale pour les deux cohortes d'âge était de 92,19%. La prévalence des parodontopathies était légèrement plus faible chez les femmes mais la gravité était nettement plus prononcée chez les hommes. On a établi une nette corrélation entre le statut socio-économique et la santé parodontale. La prévalence (Code 3+4) est de 56,44% parmi les sujets des classes supérieures, de 98% parmi ceux des classes moyennes et de 100% parmi les classes défavorisées. De même, le nombre moyen de sextants présentant des poches > 6 mm (1,12) et le nombre moyen de sextants édentés (1,43) sont nettement plus élevés chez les sujets des classes inférieures. Une corrélation entre le niveau d'éducation et la santé parodontale est évidente. Les seuls sujets au parodonte sain appartiennent au groupe ayant reçu une éducation universitaire. La prévalence du CIDP (Code 3+4) est également beaucoup plus faible chez ces mêmes sujets. Il existe aussi une corrélation évidente entre le niveau d'éducation et la perte de dents. Pour ce qui concerne les dents

manquantes, 22% sont le fait de parodontopathies et 77% le fait de caries. La prévalence des parodontopathies observées dans cet échantillonnage représentatif de la population adulte du Chili montre que toute la population a besoin d'être éduquée en matière d'hygiène bucco-dentaire et de subir un détartrage et que 45,70% ont besoin d'un traitement parodontal complexe.

D

Parodontalerkrankungen und Behandlungsbedarf bei 35-44jährigen sowie 65-74jährigen Bewohnern der chilenischen Hauptstadt Santiago - eine CPITN-Untersuchung

Zusammenfassung

Innerhalb einer Gruppe von 35-44jährigen und 65-74jährigen Chilenen wurde eine CPITN-Studie (Gruppenindex zur Beurteilung der Behandlungsbedürfnisse bei Parodontalerkrankungen) durchgeführt. Die insgesamt 1150 willkürlich ausgewählten Probanden wurden nach Alter, Geschlecht, sozio-ökonomischer Herkunft und Bildungsniveau zu einzelnen Gruppen zusammengefaßt. Chronisch entzündliche Parodontopathien lagen bei 90,89% (Wert 3+4) der 35-44jährigen und bei 100% der 65-74jährigen vor. Dies ergab einen Schnitt für beide Altersgruppen von 92,19%. Bei den Frauen wurde eine reduzierte Häufigkeit festgestellt, während bei den Männern der Schweregrad der Erkrankung signifikant höher war. Zwischen sozio-ökonomischem Status und Parodontalstatus der Personen bestand ein signifikanter Zusammenhang. In der Gruppe der Personen mit hohem Sozialstatus lag das Vorkommen von Parodontalerkrankungen bei 56,44% (Wert 3+4), in der Probandengruppe mit mittlerem Sozialstatus bei 98%, und bei den Versuchsteilnehmern mit niedrigem sozio-ökonomischem Status traten Parodontopathien in 100% der Fälle auf. Die mittlere Anzahl von Sextanten mit Zahnfleischtaschen, die mehr als 6mm (1,12) tief waren und die mittlere Anzahl diesbezüglich nicht relevanter Sextanten (1,43) war bei Personen mit niedrigem Sozialstatus signifikant höher. Ebenfalls deutlich wurde die Verbindung zwischen Bildungsniveau und parodontaler Gesundheit. Letztere wiesen ausschließlich Personen mit Universitätsbildung auf, bei denen im übrigen auch ein signifikant niedriger Schweregrad (vgl. Wert 3+4) vorlag. Eine ebenfalls signifikante Verbindung bestand zwischen Ausbildungsniveau und Zahnverlust, dem in 22% der Fälle eine Parodontal- und in 77% der Fälle eine Karieserkrankung vorausgegangen war. Die für die untersuchte Gruppe erwachsener Chilenen ermittelten repräsentativen Ergebnisse bzgl. des Auftretens von Parodontalerkrankungen lassen darauf schließen, daß ein genereller Bedarf an Mundhygieneaufklärung und Scaling in der gesamten chilenischen Bevölkerung besteht. Desweiteren kann davon ausgegangen werden, daß 45,70% der Menschen einen dentalchirurgischen Eingriff benötigen.

E

Salud periodontal y necesidades de tratamiento, usando el CPITN, en la población de 35-44 y de 65-74 años de Santiago de Chile

Resumen

Se efectuó un estudio epidemiológico en la población chilena de 35-44 y 65-74 años de edad, usando el CPITN. Se usó una muestra aleatoria y estratificada por edad, sexo, y nivel socioeconómico de 1150 sujetos. La prevalencia de enfermedad periodontal (Códigos 3+4) fue 90.89 por ciento en sujetos de 35-44 años, y 100 por ciento en sujetos de 65-74 años. La prevalencia total de enfermedad periodontal fue 92.19 por ciento en ambos grupos etarios. La prevalencia de enfermedad periodontal fue levemente menor en mujeres, pero un porcentaje significativamente mayor de hombres presentaron bolsas >6mm, y el promedio de sextantes con bolsas >6mm fue también significativamente más alto en los hombres. Se encontró una asociación significativa entre salud periodontal y nivel socioeconómico. La prevalencia de enfermedad periodontal (Código 3+4) fue 56.44 por ciento en sujetos de nivel socioeconómico alto, 98 por ciento en sujetos de nivel medio, y 100 por ciento en sujetos de nivel socioeconómico bajo. También el número de sextantes afectados con bolsas >6mm (1.12) y el promedio de sextantes excluidos eran significativamente más altos en sujetos de nivel socioeconómico bajo. La asociación entre salud periodontal y nivel educacional fue también evidente. Los únicos sujetos sin enfermedad periodontal eran solo del grupo con educación universitaria, y la prevalencia de enfermedad periodontal (Códigos 3+4) fue significativamente menor en ese grupo. Se encontró también asociación significativa entre el nivel educacional y la pérdida de dientes. El 77 por ciento de los dientes se perdieron por caries y el 22 por ciento por enfermedad periodontal. La prevalencia de enfermedad periodontal en la población adulta de Chile muestra que el total de esa población necesita instrucciones de higiene bucal y destartraje, y que el 45.70 por ciento necesita tratamiento periodontal complejo.

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