Oral Health Condition and its Impact on the Quality of Life of Dependents

Condição de Saúde Bucal e seu Impacto na Qualidade de Vida em dependentes Químicos

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Abstract

Chemical dependency is a chronic disease, which in addition to generating catastrophic consequences throughout the social structure, favors the appearance of oral alterations, which are influential factors in the quality of life of these individuals. The objective of this study was to investigate the impact of oral health status, self-perception, oral hygiene habits and access to dental services in the quality of life of drug addicts. This is a quantitative cross-sectional exploratory study with chemical dependents living in poverty in a rehabilitation center. The data collection was divided in two phases, the first with the application of two research instruments, a survey built exclusively for this study and the Oral Health Impact Profile (OHIP-14). The second phase was performed the DMFT index (decayed, missing and restored teeth). In the analysis of the data, the OHIP-14 was processed by the additive method, and dichotomized by low median and high impact. The bivariate analyzes were performed with the independent variables using the chi-square test and Fisher's exact test with a significance level of 5%. 38 individuals in a state of recovery and social reinsertion were part of the study. There were statistically significant associations between quality of life and tooth pain in the last 6 months, need for dental treatment, xerostomia, DMFT, and daily toothbrushing number. It was concluded that there was the impact of oral health condition, self-perception and habits of hygiene on the quality of life of chemical dependents. However, no statistically significant associations were found regarding access to dental services.

Keywords: Oral Health. Substance-Related Disorders. Public Health.

Resumo

A dependência química é uma doença crônica, que além de gerar consequências catastróficas em toda a estrutura social, favorece o surgimento de alterações bucais, que são fatores influentes na qualidade de vida destes indivíduos. Objetivou-se investigar o impacto da condição de saúde bucal, autopercepção, hábitos de higiene oral e acesso aos serviços odontológicos na qualidade de vida de dependentes químicos. Trata-se de um estudo exploratório transversal quantitativo com dependentes químicos em situação de pobreza de um centro de reabilitação. A coleta dos dados foi divida em duas fases, sendo a primeira com aplicação de dois instrumentos de pesquisa, um inquérito construído exclusivamente para este estudo e o Oral Health Impact Profile (OHIP-14). A segunda fase foi realizada o índice CPO-D (dentes cariados peridos e restaurados). Para análise dos dados, o OHIP-14 foi processado pelo método aditivo, e dicotomizado pela mediana em baixo e alto impacto. A partir disto, foram feitas as análises bivariadas com as variáveis independentes utilizando o teste Qui-quadrado e Exato de Fisher com nível de significancia em 5%. Fizeram parte do estudo 38 indivíduos em estado de recuperação e reinserção social. Verificou-se associações estatisticamente significantes entre a qualidade de vida e a dor de dente nos últimos 6 meses, necessidade de tratamento odontológico, xerostomia, CPO-D e número de escovação dentária diária. Conclui-se que houve o impacto da condição de saúde bucal, autopercepção e hábitos de higiene horal na qualidade de vida dos dependentes químicos. Entretanto, não foram encontradas associações significantes em relação ao acesso aos serviços odontológicos.

Palavras-chave: Saúde Bucal. Transtornos Relacionados ao Uso de Substâncias. Saúde Pública.

1 Introduction

The indiscriminate use of licit and illicit psychoactive substances is a growing phenomenon in recent decades, which in addition to generating individual catastrophic consequences, affects the whole social structure encouraging the trafficking, violence, crime, exploitation and the addiction.[1-3]

According to the World Drug Report of the UN, approximately 272 million individuals from 15 to 64 years, have already used some kind of illegal drugs during their lifetime. On the national scene, in accordance with the Brazilian report of drugs, the northeastern and southeastern regions are the most prevalent as the abusive use of such psychoactive substances. In relation to the most used main drugs, marijuana, cocaine and crack were mentioned. In addition, a publication of the United Nations Office on Drugs and Crime - UNODC, Brazil was characterized as one of the countries with high prevalence of cocaine use (inhaled and smoked), while a large part of the world, this proportion is declining.[3,4]

Chemical dependence is a chronic disease characterized by recurrent and compulsive use of psychoactive substances, which directly affects the central nervous system, culminating

in the emergence of drastic effects in general and oral health of these individuals.[5] With the loss of self-esteem, low demand of dental services and poor oral hygiene habits, conditionaed to the compulsive use of alcohol, tobacco, marijuana and cocaine can result in changes in the stomatognathic system, such as a reduction of the salivary flow, halitosis, dental caries, periodontal disease, angular cheilitis, dental erosion, edentulism, alteration of the salivary ph and benign and malignant oral lesions .[6-10]

Therefore, the preparation of dental surgeons in care for this vulnerable group, as well as the identification of lesions of the oral cavity arising out of the indiscriminate use of these drugs, is fundamental to decrease pain, avoid complications with other medicinal products and assist in psychosocial rehabilitation as the rescue of self-esteem.[6,11]

Because they were considered socially marginalized and unfit to moral expectations, the pursuit of these individuals for healthcare is minimal, given the history of pre-judgment on past experiences, and the perceived discrimination during care by unprepared professionals. For these reasons, the model of health care that should be cozy, universal and complete, becomes a barrier, being a prerogative factor for the exclusion and depreciation to their own health.[12,13]

Studies have evidenced the influence of oral health conditions, on the quality of life of people living in high-risk situations or positions of vulnerability. This indicator, in turn, becomes fundamental for the planning of actions and health services, because the condition perceived subjectively on the quality of life, may change the direction of healing, as well as interfere in the course of treatment.[14,15] In this respect, upon considering the chemical dependence as a predictor interferer in quality of life, research issues related to the broad spectrum of oral health is essential for the redemption of the individual from addiction, as well as breaking with the perpetuation of suffering, pain and anguish.[10,16]

Therefore, given the scarcity of research that address issues related to the use of dental services and self-image in oral health, the objective of this study is to investigate the impact of oral health conditions, perception, oral hygiene habits and access to dental services on the quality of life of chemical dependents.

2 Material and Method

2.1 Sample characterization

This is an epidemiological study, cross-sectional quantitative analytical type, with chemical dependents from a recovery and rehabilitation center for men. The study site, which is located in the north of São Paulo, is of philanthropic nature, without governmental and private financial support. The target audience of the institution are male individuals with dependence on licit and illicit substances, living in conditions

of poverty or who are homeless. Therefore, 38 patients took part of this research. The majority of hospitalizations occurred by spontaneous demand, by referral of Reference Center of Social Assistance in the municipality or interdictoin of their own family of the individual.

All individuals who agreed to participate in the research and signed the informed consent form have been included. As an exclusion criterion, the lucidity to respond to the survey and those with special needs were taken into account.

The present study was approved by the Research Ethics Committee, according to Resolution 466/12 in research with human beings. Process FOA 2007/-01016.

2.2 Data collection

The volunteers who agreed to participate in the research were sent to a reserved room, where the first part of the study was performed, with the application of the investigation by means of interview.

1st Phase

For the realization of this study a semi-structured inquiry was elaborated, in order to obtain not only the objectivity of responses, but also the possibility to explore the depth of the speech. In this research instrument structured and semi-structural variables were addressed regarding the socioeconomic conditions, recurrent use of drugs, oral morbidities, self-perception in oral health and use of dental services. Prior to the completion of the study, a pre-test of this inquiru was carried out , in order to determine the sensitivity of the used variables and the responses accuracy. At this moment, when necessary, corrections and adaptations of the proposed inquiries were performed.

Oral Health Impact Profile (OHIP) was used in its reduced form with 14 questions (OHIP-14), in order to assess the impact of oral health problems in the quality of life of these individuals. This instrument was chosen for the present study, given its capacity of psychometric measurement by the analysis of the conditions inherent to the self-reported oral health.

This instrument created by Slade et al.[17] and validated to Portuguese by Oliveira et al.[18], brings together the 14 questions in seven dimensions: limitation of pain, physical pain, psychological distress, physical disability, mental impairment, disability and handicap. The alternatives to answer each question are rated in scores from 0 to 4, as the severity increases, therefore they are divided into never (0) Seldom (1) sometimes (2) Often (3) and always (4).

2nd Phase

For this phase, the individuals were conducted to the outer part of the institution, for the achievement of the intraoral examination. Data collection was conducted by two

researchers previously calibrated for the implementation of research instruments, as well as for the achievement of the oral clinical examination. In the intraoral clinical evaluations the methodologies employed in the fifth edition of the Oral Health Surveys were used: Basic Methods of the World Health Organization (WHO) 2013[19] and the Evaluation Manual SB Brazil 2010[20]. Thus all the rules for the implementation of an epidemiological survey were followed, with use of natural light, gauze, intraoral mirror and periodontal WHO probe for coronary inspection of dental elements.

At this time he examinations CPO-D (permanent, decayed, missing and restored teeth) were performed and the presence of oral lesion. The activities were conducted in the courtyard of the institution under natural light and all the biosafety recommendations were assured.

The conduct of the examinations was done by two calibrated researchers, with kappa coefficient of concordance inter-examiner 0.90 and intra-examiner 0.93. In the calibration process, a group of individuals was used of the same population under study, from another institution, which were not included in the sample. In addition, discussions were performed on the differences found and the tests were repeated when they were necessary.

2.3 Statistical ANALYSIS

In the data analysis, descriptive statistics was used in order to determine the measures of central tendency and dispersion; and the explanation of the results were summarized by means of tables and charts.

Concerning the OHIP-14, additive method was used, with the total sum of scores of all sizes (maximum of 56), in order to obtain an absolute value and discriminatory power among the groups. Subsequently, the result of the instrument was dichotomized into "low impact" and "high impact" (dependent variable), using the measurement position, the distribution of the median.

In addition, for the verification of the association with the independent variables, the bivariate analyzes were performed by use of the Chi-square test and Fisher's exact test with a significance level of 5%. The data were entered and tabulated in duplicate through the aid of the software Microsoft Excel, and analyzed using Epi Info 7.2.5.2.

3 Results and Discussion

38 individuals took part of the study in recovery and social reintroduction state. It was found that the average age of the participants in the study was 43.42 years (SD± 8.51). Concerning the marital status, skin color and schooling, 26 (68.4%) were single, 26 (68.4%) black and 18 (47.40%) had incomplete primary education.

As regards access to dental services, a large part had taken the last treatment more than 2 years ago (52.63%),

and although the majority of participants had used the public service (68.4%), they believe that access to dentistry is easier in private clinics (52.63%). On the reason for the demand for dental services, the main causes were for pain/extraction (73.7%) (Table 1).

Table 1 - Distribution of self-perception in oral health and access of chemical dependents to dental services

Access to Dental Services	n	%
When did you go to the dentist the last time?		
Less than one 1 year	16	42.10%
1 to 2 years	2	5.27%
More than 2 years	20	52.63%
When was your last dentist appointment ?		
Private	12	31.60%
Public	26	68.40%
What was the reason for your last appointment?		
Pain	12	31.60%
Extraction	16	42.10%
Treatment	6	15.80%
Does not know	4	10.50%
What did you think of the last treatment?		
Good	30	78.90%
Regular	6	15.80%
Bad	2	5.30%
Where is it easier the access to dental services?		
Private	20	52.63%
Public	18	47.37%
Total	38	100%

Sourxe: Research data.

In Table 2, it was found that the mean of DMFT index was 18.26, with high prevalences of tooth loss and with previous history of caries.

Table 2 - Means and Standard Deviation of the experience of dental caries (decayed, missing and restored) in chemical dependents.

Teeth	Average	SD
C	2.00	2.26
P	11.47	8.42
O	4.79	4.48
CPO-D	18.26	5.90

Note: C-Carious; P-missing; O- restored.
Sourxe: Research data.

In Table 3, it was found by means of bivariate analysis, statistically significant associations between the dependent variable and the presence of tooth pain in the last 6 months (0.0005), self perception about the need for dental treatment (0.020), complaints of dry mouth (0.004), CPO-D (0.002) and number of daily tooth brushing (0.049).

Table 3 - Bivariate analysis between the impact of oral health on quality of life and the independent variables.

Independent Variables	OHIP ≤5 (20)	OHIP>5 (18)	P-Value
Age			
≤ 44	12	10	1.0
>44	8	8	
Marital Status			
Single or divorced	16	16	0.663
Married or Cohabiting	4	2	
Last Dentist Appointment			
≤ 1 year	6	10	0.188
> 1 year	14	8	
When was your last dentist appointment ?			
Private	3	9	0.485
Public	10	16	
What was the reason for your last appointment?			
Extraction / Pain	10	18	1.0
Treatment	4	6	
Have you ever had a toothache?			
Yes	16	16	0.663
No	4	2	
Did you have toothache in the last 6 months?			
Yes	2	12	0.0005**
No	18	6	
Do you feel the need for dental treatment?			
Yes	14	18	0.020**
No	6	0	
How is caries prevented?			
Brushing your teeth	14	8	0.188
Going to the dentist	6	10	
Are teeth are important to live in society?			
Yes	20	16	0.217
No	0	2	
Do you have difficulty smiling?			
Yes	4	4	1.0
No	16	14	
Do you complain about dry mouth?			
Yes	6	14	0.004**
No	14	4	
I have dentures			
Yes	8	4	0.288
No	10	14	
Do you have difficulty chewing?			
Yes	10	10	0.756
No	10	8	
DMFT †			
≤ 20	8	16	0.002**
> 20	12	2	
How many times a day do you brush your teeth?			
≤ 2	14	6	0.049*
> 2	6	12	
Do you use dental floss?			
Never	16	14	1.0
Rarely	4	4	

Note: *The chi-square test ; **Fisher exact test; OHIP ≤5: Low Impact; OHIP>5: High Impact; † using the median as a cut-off parameter (dichotomization).

Source: Research data.

Due to being considered a public health problem, the discussion about chemical dependence should be emphasized, due to the need for strengthening public policies that welcome, sustain and give assistance to these individuals.[21,22] The present study addressed issues that were influential in the quality of life of chemical dependents, reiterating the premise of integral care to that stigmatized group, in order to allow as well as better conditions of health and well-being, providing rescue and recovery of self-esteem.[16]

The profile of drug addicts found in this study is considered as a risk group, because in their majority, are individuals who live in poverty or are homeless. Thus, it was found that the variables age, marital status, educational level and skin color were similar to other studies with the same population, considering this problem a biopsychosocial phenomenon to be faced through intersectoral actions and multidisciplinary teams. [23-25] Due to being individuals in a position of vulnerability and socially marginalized, it becomes relevant the consolidation of preventive actions, at the level of primary care, for the non-use of such substances. Furthermore, with this early intervention, especially in adolescence, it might encourage the breaking of the cycle of the disease, decreasing then, numbers of dependent individuals in adulthood.[26]

In the present study, it was observed that the access to oral health services among the chemical dependents was almost exclusively for reasons of pain and/or dental extraction, in periods exceeding two years. These data are similar to the results found by O'Sullivan et al.[27] and Alves et al.[28], noting that the search for emergency oral treatments were the main reasons for dental care. The negligence with self-care in health, low self esteem, the effects of licit and illicit substances on the periodontal tissues and reduced access to dental services are influential factors in the oral condition of drug users.[16,29]

In relation to the location of demand for dental care, it was observed that a large part appealed to the public health service. However, when they are inquired about where it is easier access to treatment, more than half of the interviewees mentioned the private services. This causality is conditioned to the financial situation of the research participants, who live in precarious situations or are socially marginalized. Whreas their perception by ease of access, this can be related to the form of planning and organization of the programmed demand from local health unit. Issues such as attention, epidemiological analysis, risk criteria, spontaneous demand care services and programmatic agenda are key factors to facilitate the entrance door to the service, as well as ensure the inseparable right of the citizen to health, in accordance with the principles of the SUS's universality, equity and comprehensiveness.[30,31]

Thus, dentistry in primary attention in health, can become a mediator for the entrance to the integral care of the addicted individual. The search for oral rehabilitation can be an inducer for the interruption of addiction and rediscovery of self-image and social interaction.[32] Moreover, the oral health in this context may go beyond clinical care, to develop preventive

and intersectoral educational actions, with multidisciplinary teams, in order to obtain broad and systemic vision of the individual to act in groups vulnerable to disease.[33]

With the use dependent on psychotic substances, the individual becomes hostage to the created condition in which this oppressive relationship interferes negatively, in both their social and family ties, as well as in physical and emotional changes of their own person.[34] Therefore, the use of instruments for measuring the perceived condition, based on subjective evaluations of quality of life, are essential tools for the situational understanding of the individual in the disease context, which in addition to assisting in the diagnosis, enables the creation of strategies of prevention, protection and recovery to health.[15]

In the present study statistically significant associations were observed among variables related to oral health conditions, self-perception and habits of hygiene in the quality of life of drug addicted individuals. There are fewscientific evidences assessing these conditions associated to OHIP, however, some studies justify these possible relationships, due to the relevance of these variables to the severity of oral health problems in this specific population.[35.36]

The presence or history of tooth pain among the studied population was a variable statistically significant, justifying that the oral pathologies have an influence on quality of life. This is in line with the study of Marques[37], in which individuals who had no toothache were 2.6 times less likely to have an impact on quality of life. Furthermore, according to Grupta et al.[7] and D'almore et al.[10] the presence of this painful symptoms is attributed to the existing oral condition, given the high prevalence of dental caries, dental erosion, periodontal disease and dental trauma.

Another associative factor in the quality of life of individuals was the presence of xerostomia. The use of the substances like crack, cocaine, tetra-hydro-canabinol (THC), tobacco and alcohol, lead to decreased salivary flow, resulting in changes as the low buffering capacity, difficulty removing microorganisms and foods.[28.32] For that reason, such situation becomes favorable to the emergence of oral diseases such as dental caries and periodontal disease, as well as in systemic complications, compromising the quality of life of these individuals.[34.38]

The DMFT index observed in the study sample was higher than in the research conducted by Marques et al.[14]; Saied-Moallemi et al.[39] and Cury et al.[40], which ranged between 14, 15 and 16 respectively. In comparison to the general population,drug addicted individuals, are those which have the highest rates of missing, decayed and obturated teeth, given the catastrophic effects of their habits to oral health.[39.41] Associated to this issue and in line with the history of pain, as reported, these variables can be stimulative for facilitating the understanding of the health-disease process, facilitating the critical thinking of perception in health of drug addicted

individuals.[42]

Due to being a cross-sectional study, with a risk population, socially marginalized and difficult to access, makes the scope of a representative sample difficult. Although the results of the research cannot be an infference to all individuals in the studied population, they are solid data and in line with the literature, which demonstrates the oppression and vulnerability of the quality of life, pointing to the main influential factors that should be discussed. In a general way, with this research, it is possible to reiterate the assumption, that the style of life and experienced behavior induces the aggravation of risk, and thus, endure the phenomenon of social production in the health-disease process.[15.43]

4 Conclusion

It is concluded that there is the impact between the oral health conditions by analysis of the DMFT and xerostomia; self-perception by toothache and need for dental treatment and oral hygiene habits by the number of daily toothbrushing in the quality of life of chemical dependents. Whereas regarding the access to dental services, there was no statistically significant associations.

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