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ORIGINAL

Effectiveness of the treatment applied in the smoking cessation consultation

Eficacia del tratamiento aplicado en la consulta de cesación tabáquica

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ABSTRACT

Introduction: the WHO estimates that approximately one third of the world's population is smokers, the use of traditional medicine in the treatment of smoking is recognized.
Objective: to evaluate the efficacy of the treatment applied in the smoking cessation consultation, medical office 9 of Puerto Esperanza, Viñales in 2018.
Methods: an observational, analytical cohort research was conducted with 90 smokers who met the inclusion criteria. They were divided into three study groups, according to simple random sampling, applying psychological techniques, auriculopuncture and homeopathy. Theoretical, empirical and statistical methods were applied, given in absolute and relative frequency. Variables used were: age and sex, level of schooling, type of smokers, effectiveness of the treatment, number of cigarettes smoked before and after the treatment, showing the results in tables for better interpretation.
Results: there was a predominance of the male sex and the age groups were different in the sample of the three study groups, with a predominance of patients with medium technical schooling level; 51 patients quit smoking for 56,6 %, obtaining better results with the application of homeopathy with 27 patients for 30 %. With auriculopuncture 19 patients quit smoking for 21,1 % and with the application of psychological techniques 5 patients for 5,56 %.
Conclusions: treatment with traditional and natural medicine showed better results with the application of homeopathy and auriculotherapy.

Keywords: Smoking; Consumption; Addictions; Tobacco Cessation Consultation.

RESUMEN

Introducción: la OMS calcula aproximadamente que un tercio de la población mundial es fumadora, se reconoce el uso de la medicina tradicional en el tratamiento del tabaquismo.
Objetivo: evaluar la eficacia del tratamiento aplicado en la consulta de cesación tabáquica, consultorio médico 9 de Puerto Esperanza, Viñales en el 2018.
Métodos: se realizó una investigación observacional, analítica de cohorte, con 90 fumadores que cumplieron con los criterios de inclusión. Se dividieron en tres grupos de estudio, según muestreo aleatorio simple, aplicándoles técnicas psicológicas, auriculopuntura y homeopatía. Se aplicaron métodos teóricos, empíricos y estadísticos dados en frecuencia absoluta y relativa. Se utilizaron variables como: edad y sexo, nivel de escolaridad, tipo de fumadores, efectividad del tratamiento, cantidad de cigarrillos que fumaban antes y después del tratamiento, mostrándose los resultados en tablas para su mejor interpretación.
Resultados: hubo un predomino del sexo masculino y los grupos de edades resultaron diferentes en la muestra de los tres grupos de estudio, predominaron los pacientes de nivel de escolaridad técnico medio;

abandonaron el tabaquismo 51 pacientes para un 56,6 %, obteniendo mejores resultados la aplicación de la homeopatía con 27 pacientes para un 30 %. Con auriculopuntura dejaron de fumar 19 pacientes para un 21,1 % y con la aplicación de las técnicas psicológicas 5 pacientes para un 5,56 %.
Conclusiones: el tratamiento con la medicina tradicional y natural mostró mejores resultados con la aplicación de la homeopatía y la auriculoterapia.

Palabras clave: Tabaquismo; Consumo; Adicciones; Consulta de Cesación Tabáquica.

INTRODUCTION

Tobacco is a plant native to the Americas. Its scientific name is *nicotiana tabacum*. It belongs to the *Nicotiana* genus and is part of the *Solanaceae* family, which includes more than 50 species. Its existence dates back to several thousand years. Although its popularization and spread in Europe are linked to Christopher Columbus and Rodrigo de Jerez, a member of his crew, the use of tobacco can be traced back to the Mayan period when it was primarily used in rituals.[1] During the Crimean War (1854-1856), its consumption became exponentially popular as it began to be used in the form of cigarettes.

Until then, tobacco consumption was limited to pipes, or as rolled or shredded tobacco. The sociopolitical changes during World War II accelerated the inclusion of women in the regular consumption of tobacco, a practice that had been restricted solely to men. At the same time, the first cigarette rolling machine was invented in the United States of America, leading to greater accessibility. The widespread adoption of tobacco encouraged the industries of that era to take advantage of an increasingly emerging market.[2]

It was not until the 60s that a serious attempt was made to demonstrate the harmful effects of tobacco in health. In that decade, the reports of the Royal College of Physicians (1962) and the Terry Report appeared, establishing a direct connection between tobacco and various health issues, including cancer. Nevertheless, Doll and Hill (1950) were the first to publish a study directly linking tobacco consumption to the development of lung cancer. In Spain, the publication of *Libro Blanco sobre el tabaquismo* (a book about reducing smoking harmful effects) reflects the temporal difference between developed countries and Spain in the evolution of awareness of smoking as a health issue. Successively, multiple reports have been published, all of them unequivocally demonstrating the connection between tobacco consumption and health damage, including the harmful effects on non-smokers exposed to cigarette smoke, the so-called passive smokers.[1,2]

A particularly important fact in the battle against tobacco use and related health issues is the approval by the WHO in 2003 of the Framework Convention on Tobacco Control, which lays the foundations for global tobacco control. This convention is complemented by the drafting of a report describing the basic recommendations for tobacco control in accordance with the MPOWER strategic plan. Sadly, this report states that only 5 % of the countries that are members of the United Nations implement its recommendations, and that 80 % of the countries have not been able to fully implement any of the tobacco control measures.[3]

Cuba is currently implementing the Program for the Prevention and Control of Tobacco, which regulates sale, consumption, supply and advertising with the goal of reducing tobacco use in the Cuban population by 2 % annually. In addition, it is worth mentioning that, apart from the well-documented health damage caused by tobacco, this substance has been considered a drug due to the presence of the nicotine alkaloid in it. Tobacco consumption leads to dependence, and the absence of it causes symptoms typical of withdrawal syndrome. Both nicotine dependence and nicotine withdrawal syndrome caused by tobacco use are recognized as mental disorders by the American Psychiatric Association (APA) and the WHO.[4]

Tobacco smoke contains more than 4,000 different components. Many of them have been proven to have harmful effects on health. The most studied components are nicotine, tar and carbon monoxide resulting from cigarette combustion. Nicotine is an alkaloid present in tobacco leaf. It is a colorless liquid that turns brown when exposed to air. Its addictive effects have been widely studied, and it is also potentially toxic. It is absorbed by oral, digestive, dermal and conjunctival routes, and eliminated through saliva, urine, breast milk, sweat, mucous secretions and freshly washed hair. It has a great addictive power as it takes less than 10 seconds to cross the blood-brain barrier.[2]

Tar, which has an unctuous appearance, dark color and strong odor, is one of the main solid components of tobacco. It is directly related to cigarette paper and combustion. It is one of the components most implicated in the formation of cancer due to certain compounds such as benzo(a)pyrene. On the other hand, another major component of tobacco is carbon monoxide, directly linked to combustion. Tar is absorbed through the lungs, limiting the oxygen supply to the body due to the restriction of the oxygen binding to the red blood cells.[1,2,3]

Harmful effects of smoking

Numerous studies have established a connection between active or passive tobacco consumption and multiple

diseases, including death. Tobacco use remains the leading cause of preventable disease and premature death in the world, responsible for 5 000 000 deaths annually. Unfortunately, according to the models proposed by the WHO this trend is on the rise, predicting an increase of almost twice the number of deaths by 2030. Moreover, while consumption trends are stabilizing or even declining in the most developed countries (as are mortality rates), the most disadvantaged countries are projected to experience dramatic increases in tobacco consumption and deaths.[5,6] In Cuba, many of the deaths each year are directly attributable to tobacco use; it is estimated that a large percentage of deaths from cancer and an equal percentage of deaths from cardiovascular disease are directly attributable to tobacco use. Heart disease has been the leading cause of death for the past 35 years. According to 2017 statistics, the rate was 187,3 x 10^5, followed by malignant tumors (181,2 x 10^5), cerebrovascular diseases (75,4 x 10^5), and chronic lower respiratory tract diseases (28,2 x 10^5). All these diseases are causally associated with smoking.

In our country, in 2017, smoking caused 86 % of deaths due to tracheobronchial lung cancer (92 % in men and 75 % in women), 78 % of deaths due to chronic obstructive pulmonary disease (COPD) (83 % in men and 73 % in women), 28 % of deaths due to ischemic heart disease (38 % in men and 17 % in women), and 26 % of deaths due to cerebrovascular disease (34 % in men and 16 % in women). Cardiovascular diseases and cancer were the major contributors to the total number of smoking-related deaths this year (42 %).[6]

The most studied is lung cancer, although data show that oral and laryngeal cancer are the most common. Other types of cancer, such as stomach, throat and cervical cancer, are also directly linked to smoking. A detailed analysis of tobacco-related cardiovascular diseases includes aneurysms, cardiac arrest, atherosclerosis, ischemic heart disease (angina pectoris and myocardial infarction), high blood pressure, and cerebrovascular disease. Among cardiorespiratory problems, chronic obstructive pulmonary disease (COPD) is the most common smoking-related condition, followed closely by cancer and cardiovascular disease. In addition, tobacco consumption is responsible for 80 % of deaths among patients with COPD.

The harmful effects of smoking are not limited ony to smokers; the effects on passive smokers are well known. Exposure to environmental tobacco smoke, along with alcoholism, has become the third leading cause of preventable death in the developed world. Data shows that 60 % of non-smokers are exposed to cigarette smoke both at home and at work. The health implications for non-smokers are extremely important, as they match those diseases seen in active smokers.[4,5]

Female smokers have an additional handicap because harmful effects of tobacco are transferred to the fetus, potentially causing neonatal issues such as small size or low weight, spontaneous abortion, respiratory distress syndrome, or multiple developmental delays in the fetus. Moreover, additional problems have been reported in women, such as a higher risk of infertility, delayed conception, early menopause, and increased risk of osteoporosis and hip fracture.

Other common conditions in smokers, while not as closely related to mortality, include dermatological and oral health issues, smell and taste alterations, high blood pressure, and type I and type II diabetes *mellitus*. The economic impact of tobacco is another critical aspect of the health impact of tobacco. The National Committee for Smoking Prevention estimates that 7 billion euros are spent on public health to treat the problems caused by tobacco consumption.[7]

Prevalence and epidemiology of smoking

The WHO estimates that approximately one-third of the world's population smokes, which means that approximately 1,1 billion people worldwide use and abuse tobacco. Despite the fact that tobacco consumption is declining in developed countries, there is still a significant social condemnation associated with tobacco use. In Cuba, smoking prevalence has been considered high for as long as information has been available. Some indicative studies conducted prior to 1970 reported figures exceeding 60 % in the total population. At national level, there were an estimated 2 047 714 smokers aged 17 years and older in 2001, representing a prevalence of 31,9 %, with a decrease in overall prevalence among both males (41,4 %) and females (23,0 %).

The global initiation rate in the 20-24 age group was 22,2 %, and the prevalence among young people who had ever used cigarettes was 25 %. Based on these figures, Cuba ranks 28th among the 78 member countries of the WHO. In 2010, the *per capita* cigarette consumption in the Cuban population aged 15 years and older was 1362,5 cigarettes. This figure means that each Cuban in that age group smoked approximately 4 cigarettes a day.[8]

Smoking and nicotine dependence

One of the main aspects of tobacco use is the addiction that results from its consumption and abuse. Numerous studies and organizations have emphasized tobacco dependence. Many smokers who try to quit face great challenges, and some of them fail; therefore, the concept of dependence is an essential aspect when addressing smoking as a health issue. While most smokers experience dependence, not all of them meet diagnostic criteria according to commonly used diagnostic classification systems, such as the Diagnostic and

Statistical Manual of Mental Disorders, Fourth Edition, Revised Text (DSM-IV-TR). At the clinical level, the criteria of the APA´s DSM-IV-TR (2000) or the WHO´s International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10), are commonly used to diagnose dependence. Both classification systems are based on the concept of drug dependence, and also include specific diagnostic criteria for nicotine withdrawal syndrome.[8]

The majority of people who smoke express a desire to quit, and around 60 % have attempted to do so at some point. However, each year, only 3 to 5 % of smokers who try to quit successfully do so. This low success rate can be partly explained by the fact that most quit attempts are made without any assistance, commonly known as spontaneous exercise of "willpower".[9]

Since the late 1950s, intensive research has been conducted worldwide to measure the effectiveness of various types of smoking cessation interventions. Specialized smoking treatment combines both psychological and pharmacological approaches.[10]

Various behavioral and cognitive techniques have been used and evaluated in psychological treatments for smoking cessation,[11] including aversive therapies (rapid smoking, saturation, regular aversive smoking, withholding smoke, covert sensitization, electric shock); self-monitoring, relaxation, stimulus control, gradual reduction of nicotine and tar intake, controlled smoking, contingency management, systematic desensitization, restricted environmental stimulation therapy, contingency contract, self-management and self-control methods, multicomponent programs, and relapse prevention programs.[9,10,11]

Homeopathy and auriculotheraphy are among the therapeutic options of traditional and natural medicine for the treatment of this addiction.

Homeopathy was discovered by the German physician Samuel Hahnemann and published in 1796. It studies the individual “as a whole”. Homeopathy uses substances of animal, vegetable or mineral origin diluted in alcohol (the appropriate solvent) in infinitesimal doses and, through the process of dynamization, are able to cure various pathologies in a sick individual. At higher doses (in their natural form without the process of dilution or dynamization), these substances produce in a healthy individual symptoms similar to a specific disease. They are known as homeopathic remedies, and provide information that activates the self-healing mechanisms of the body. These substances are absorbed sublingually and transferred to the brain, which sends signals to the energetic organs or *chakras*. This process increases the body´s defense mechanisms. It is based on the Hippocrates principle that “like cures like”.[16,17]

There are currently two main lines of research in auriculotherapy worldwide: Nogier's French auriculotherapy and Chinese approach. Although other auriculotherapy maps are being developed, there is a degree of consensus regarding these two maps and their applicability in various types of imbalance conditions and diseases. The French school defines the auricular microsystem as a reflexology of neurological actions of the parasympathetic system. Piercing a particular area of the auricular cartilage stimulates a corresponding area of the brain, resulting in the release of endorphins that impact the body's system by triggering the release of a neurotransmitter. The Chinese approach to auriculotherapy is grounded in the principles of Traditional Chinese Medicine (TCM) for selecting acupuncture points. The ear serves as a reflection point for all organs, including both solid *(Zang)* and hollow *(Fu)* ones. This is why many disorders resulting from the pathogenic energies affecting organs can be treated either entirely or partially through auricular therapy.[18,19,20]

However, quitting smoking demands the necessary risk awareness, along with a sufficient level of motivation, and knowledge of the various strategies to achieve abstinence, manage potential relapses, persist until the end and adopt a healthy lifestyle without tobacco. Therefore, we are motivated to conduct this research in order to evaluate the effectiveness of the treatment provided in the smoking cessation consultation for patients with smoking dependence belonging to the medical office 9 of Puerto Esperanza, Viñales, in 2018, to reduce the health damage caused by this harmful habit.

METHODS

Observational, analytical cohort study with three control groups. The study was conducted according to inclusion and exclusion criteria defined according to the interests to be studied, with smoking patients to be attended and evaluated in the medical office, in 2018.

Universe and sampling

The study universe consisted of 190 smoking patients. From this group, 90 patients who expressed a willingness to quit smoking, gave their consent to participate in the study, and met the specified inclusion and exclusion criteria. Randomized sampling was used to assign and create three groups, each consisting of 30 patients, with an equal probability of selection (Group I, II, and III). During the initial consultation, patients were informed about the adverse health effects of smoking. They were asked about their daily cigarette consumption, and their medical records were documented. In addition to signing the informed consent form, patients were instructed on appropriate techniques, which included psychological support, auriculotherapy or

homeopathy, depending on the group to which they belonged.

Inclusion criteria

- Patients who expressed genuine intention to quit smoking.
- Willingness to participate in the study.
- Age 19 years old or older.
- Cigarette consumption equal to or greater than 10 units per day for more than 1 year.

Exclusion criteria

- Pathological ear conditions such as otitis externa and perichondritis.
- History of allergic reactions to adhesive tape.
- Psychiatric illnesses.
- Other treatments for smoking cessation in the last twelve months.
- Patients who refuse to be included in the study.
- Other concurrent addictions at the time of the research: alcoholism, psychotropic drugs, etc.
- Mental retardation.

Exit criteria

- Discontinuation of treatment for any reason.

Procedure

Initial interviews were conducted where each patient was informed about the objective of the study. Those who agreed to participate filled out the informed consent model (Annex 1). With the data provided by the patients, medical records were created (Annex 2). During these interviews, the following description was explained to them:

- Group I: patients who underwent combined psychological techniques through 10 weekly sessions in which relaxation training was conducted. The patients were trained using Jacobson's progressive relaxation in four stages.[1,4,21] In the first session, the hand-arm muscle group was trained. The second session focused on the face-neck-shoulder group. The third session focused on the chest-abdomen-back muscle group, and the fourth session trained the thigh-leg-foot muscle group. Self-control and self-monitoring techniques were applied. The purpose of these techniques was to enable patients to consciously control the number of cigarettes they smoked each day, the time of day they smoked, and the place and situation in which they smoked. Each individual recorded this information, and later these records were reviewed and discussed in group sessions. At the end of the program, participants were expected to completely change their smoking habits, either by quitting completely or by reducing the number of cigarettes they smoked per day.
- Group II: Patients who underwent 10 sessions (10 weeks), once a week, of auriculotherapy using Holy Thistle seeds and adhesive tape on specific points.[6,7,19]

Shen Men: Located on the lateral third of the triangular fossa, at the crotch between the upper and lower antihelix.

Lung: Located at the heart point 1, in a U-shape.

Anxiolytic: Located in the VI quadrant. At the lower medial angle next to the fixed edge of the lobe.

Liver: Located in the central region of helix tubercle.

Once the points were located, pressure was applied with a pointed object to create a depression in the skin. The seed was then placed on that spot and adhesive tape was used to secure the seed in place.

- Group III: patients who received the homeopathic remedy Nicotinum 30 CH.[1,9, 16, 17]

Dose: 5 sublingual drops each time the patient feels the urge to smoke, 5 minutes apart, up to a total of 10 doses. They were advised not to smoke during treatment.

Each patient was advised, as a precaution, that the remedy should not taste of other substances in the mouth. They were instructed to take the remedy 20 minutes before or 20 minutes after eating or brushing their teeth. Patients were instructed to give the remedy bottle ten taps in the palm of their hand before use. Additionally, it was emphasized not to store the homeopathic remedy near electrical appliances, direct light, sources of vibration, or areas with strong odors.

This therapy was evaluated weekly.

Patients were re-evaluated at 15 days, three months, six months, and one year after treatment initiation.

The information was processed manually, by counting and using a calculator.

The statistical method employed to achieve the goals of assessing the impact of the applied techniques and evaluating the number of cigarettes consumed before and after the treatment was based on both absolute and relative frequencies.

Ethical considerations

This research adhered to fundamental ethical principles, including respect for individuals, beneficence, non-maleficence, and justice. Throughout this study, ethical conduct was maintained to ensure that the information obtained was used solely for research purposes.

RESULTS

Age and sex are presented separately in each study group. There was a predominance of the age group between 55 and 59 years (23,3 %) and 80 % of the male sex in group I. 83,4 % of group II belonged to the age group between 45 and 49 years, with 26,6 % of the male sex. In Group III, 23,3 % of participants were aged between 20 to 24 years, and 76,6 % were male.

Table 1. Smoking groups by educational level. Treatment efficacy in the smoking cessation consultation. Medical office 9, Puerto Esperanza, 2018.

Educational level	Group I		Group II		Group III		Total	
	No.	%	No.	%	No.	%	No.	%
Secondary (9th grade)	7	7,78	6	6,67	9	10	22	24,5
Intermediate technical	18	20	20	22,2	17	18,8	55	61,1
Pre-university	5	5,55	4	4,44	4	4,44	13	14,4
Total	30	33,3	30	33,3	30	33,3	90	100

Upon examining the patient distribution according to their educational level (table 1) it is evident that there is a predominance of intermediate technical education, with 55 patients (61,1 %). There are 22 patients with completed secondary education (24,5 %), and 13 patients with a pre-university level (14,4 %).

Table 2. Smoking groups based on the number of cigarettes they consume

Number of cigarettes they consume	Group I		Group II		Group III		Total	
	No.	%	No.	%	No.	%	No.	%
Light	9	10	7	7,78	6	6,66	22	24,4
Moderate	8	8,89	8	8,89	10	11,1	26	28,9
Heavy	13	14,4	15	16,7	14	15,6	42	46,7
Total	30	33,3	30	33,3	30	33,3	90	100

Table 2 shows that heavy smokers are the most common group with a total of 42 patients (46,7 %). They are followed by moderate smokers with 26 patients (28,9 %), and finally light smokers with 22 patients (24,4 %). These results are consistent with previous research in this area.

Table 3. Educational level and type of smokers in study groups

Educational level/Type of smokers	Group I			Group II			Group III			Total
	L	M	H	L	M	H	L	M	H	
Secondary (9th grade)	1	3	3	2	1	3	3	2	4	22
Intermediate technical	6	3	9	3	6	11	2	6	9	55
Pre-university	2	2	1	2	1	1	1	2	1	13
Total	9	8	13	7	8	15	6	10	14	90

Legend: L: light; M: moderate; H: Heavy.

Table 3 shows a higher prevalence of smokers among those with lower educational level. In total, there are 22 individuals with basic secondary education (10 are heavy smokers), while there are 55 individuals with intermediate technical education (29 are heavy smokers).

A study conducted in Tunja, Colombia, in 440 patients aged 15 to 44 years, revealed that the highest prevalence of smoking was among those with lower educational level, especially in primary and secondary school. This observation is consistent with the results of our study. [23]

As shown in table 4, the treatment showed the most favorable results in the third group, where it was effective in a total of 27 patients (30 % of the group). In the second group, the treatment was successful in 19 patients (21,1 %). In the first group, the treatment was effective in 5 patients (5,56 %). In summary, the treatment was effective in 51 patients (56,7 % of the total sample).

Table 4. Effectiveness of treatment by study groups

Effectiveness of treatment	Group I		Group II		Group III		Total	
	No.	%	No.	%	No.	%	No.	%
Yes	5	5,56	19	21,1	27	30	51	56,7
No	25	27,8	11	12,2	3	3,33	39	43,3
Total	30	33,3	30	33,3	30	33,3	90	100

Table 5. Post-treatment cigarette consumption by study group

Post-treatment cigarette consumption	Group I		Group II		Group III		Total	
	No.	%	No.	%	No.	%	No.	%
Null	5	5,56	19	21,1	27	30	51	56,6
Light	7	7,78	2	2,22	2	2,22	11	12,2
Moderate	10	11,1	4	4,44	1	1,11	15	16,7
Heavy	8	8,89	5	5,56	0	0	13	14,5
Total	30	33,3	30	33,3	30	33,3	90	100

Table 5 shows that out of a total of 90 smoking patients, 51 successfully quit smoking. The best results were obtained in treatment group number three, where 27 patients (30 %) succeded. Group number two had 19 patients (21,1 %) and group number one had a lower success rate with 5 patients (5,56 %). Although 100 % smoking cessation wasn't achieved, there were positive results in terms of reducing or eliminating cigarette consumption compared to the pre-treatment period, in particular a reduction in heavy smoking from 46,7 % to 14,5 %.

DISCUSSION

In general, there was a male predominance within the study sample in all three study groups. However, the age distribution varied among groups. When it comes to sex, it's a well-known fact that men tend to start smoking at a younger age. Cuban culture is characterized by a strong tradition of smoking, whether cigarettes or tobacco. This practice is further encouraged by the chance of harvesting tobacco in Pinar del Río lands.

The majority of older adults were exposed to combined psychological techniques, which were generally well received. However, the best outcomes were not achieved, consistent with the observations of authors who recommend integrating these techniques with traditional treatments.[1,4,8,9,22]

Adults who received auriculotherapy treatment (group II) showed great discipline, and achieved more successful results in quitting this harmful habit. This observation is consistent with the literature, which highlights the positive results associated with this treatment for smoking cessation.[6,7,21]

Homeopathy was the treatment for patients in group III, who were typically the younger participants. They responded positively to smoking cessation, consistent with similar findings documented in the reviewed articles.[15,17,18]

The distribution of patients according to their level of education reflects the characteristics of a rural population where agriculture is the main source of employment.

A study of Brazilian patients revealed a higher prevalence of light smoking, which, although not directly in line with our findings, highlights the elevated smoking rates, a trend similarly observed in Cuba.[22]

In 2017, the *per capita* cigarette consumption in the Cuban population aged 15 years and older was 1362,5 cigarettes. This figure means that each Cuban in that age group smoked approximately 4 cigarettes a day.

Reports from the WHO indicate that tobacco use is responsible for approximately 5 million deaths each year. It is anticipated that this number will rise to over 10 million by the year 2030. It is the only legal consumption product that kills between one-third and one-half of its users.

A study performed in Spain for the treatment of tobacco dependence (taken into account for the approval of Law 28/2005), found that among various techniques and approaches to smoking dependence, the most effective methods were drug treatments with varenicline and bupropion, followed by psychological treatment. The study also suggested that alternative treatments, such as traditional and natural medicine, were less effective than placebo treatments given to some patients. These findings are in contrast to the results of our study, where traditional and natural medicine, especially homeopathy, was found to be more effective.

A study of adults in Australia found that the most effective model for reducing tobacco prevalence included stricter anti-smoking laws, higher tobacco prices, and increased exposure to media campaigns. Together, these factors led to a 76 % reduction in smoking prevalence between February 2002 and June 2011.[25,26]

CONCLUSIONS

In conclusion, smoking is a health problem primarily associated with low levels of education. Treatment with traditional and natural medicine showed better results, specially with the application of homeopathy and auriculotherapy.

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