Effectiveness of a Brief Intervention on anti-smoking motivation in drug addict patients staying in a UHD
Efectividad de una Intervención Breve sobre motivación antitabáquica en usuarios drogodependientes ingresados en una UHD

Maria Rosario Valera Fernandez 1,2
Raquel Suarez Perez 1
Rosa Aceña Dominguez 1
Xavier Aliart Perarnau 1
Ana Maria Gonzalez Cuello 2
Francina Fonseca Casals 1

1 Hospital Detoxification Unit. Institute of Neuropsychiatry and Addictions (INAD). Consorci Mar Parc de Salut. Barcelona. Spain. charo-valera@hotmail.com
2 Nursing department. University Nursing School of the University of Murcia. Murcia. Spain.

http://dx.doi.org/10.6018/eglobal.18.2.313731

ABSTRACT:

Justification: There is a connection between smoking and substances use disorder, especially alcohol and cannabis. Nevertheless, health interventions seem not to be addressed to this approach.

Objective: Evaluation of the motivation degree for the smoking quit after developing a brief psychoeducational intervention on smoking.

Methodology: It is a quantitative research of analytical type, almost experimental, developed by means of two experimental series, of the types pre- and post-intervention. A brief educational intervention is applied and there is an evaluation of the differences in the motivation for the smoking quit in a group before the intervention and in another one after the intervention.

Results: There is a difference of 1.27 points in the degree of motivation found in the individuals regarding the experimental groups.

Conclusions: Drug addict people are smokers with a high degree of nicotinic dependence, so it is necessary to design suitable strategies of quitting.

Key words: smoking; drug addiction; hospitalization; intervention; nursing

RESUMEN:

Justificación: Existe una asociación entre tabaquismo y TUS, especialmente con alcohol y cannabis. Sin embargo, las intervenciones sanitarias parecen no ir encaminadas a su enfoque.

Objetivo: Evaluar el grado de motivación para el abandono tabáquico tras realizar una intervención psicoeducativa breve sobre abordaje del tabaquismo.

Metodología: Se trata de una investigación cuantitativa de tipo analítico cuasiexperimental que se lleva a cabo mediante dos cohortes experimentales, del tipo pre- y post-intervención. Se aplica una intervención breve educativa y se evalúan las diferencias en la motivación para el abandono tabáquico en un grupo antes de la intervención y en otro grupo después de la misma.
**Resultados:** Existe una diferencia de 1,27 puntos en el grado de motivación encontrado en los individuos respecto a los grupos experimentales.

**Conclusiones:** Las personas drogodependientes son fumadoras con altos grados de dependencia nicotínica por lo que es preciso diseñar estrategias de cesación adecuadas.

**Palabras clave:** tabaco; drogodependencia; hospitalización; intervención; enfermería.

### INTRODUCTION

There are several studies that have shown a prevalence of smoking habit two or three times higher in people suffering from a mental disorder compared to the general population, mainly in Schizophrenia, Depression, Anxiety and Substance Use Disorder (SUD)\(^{(1,2)}\). Specifically in the case of TUS, it has been observed that individuals consume more cigarettes daily and initiate tobacco consumption before the general population\(^{(3)}\).

It is known that tobacco has a significant association with alcohol and cannabis dependence. An Australian study\(^{(4)}\) conducted in the general population shows that smokers are 5 times more likely than non-smokers to meet criteria for an alcohol dependency disorder and a 5.5 times higher probability of suffering a disorder for consumption of hypnosedatives, stimulants and opioids. The association with cannabis is even more intense, with a probability 9 times higher.

A high prevalence of smoking has been described in the clinical population with SUD. For example, it is known that 80-90% of alcoholics smoke\(^{(5)}\). This is an important phenomenon, given that from 5 to 10% of the population, depending on different studies, samples and areas of the country, has problems of alcohol addiction. In addition, it is known that mortality from tobacco-related diseases is the leading cause of death in alcoholics over diseases classically associated with alcoholism (eg liver cirrhosis)\(^{(6)}\). Therefore, alcoholics are an important group in which both the treatment of alcohol and tobacco consumption is important.

Despite the aforementioned, smoking cessation does not constitute a focus of attention in clinical interventions performed in the drug-dependent population. There are several barriers that interfere in these interventions; the first one is found in the same professionals, having in mind a generalized idea that these individuals have more difficulties in achieving tobacco abstinence, so they are not advised or recommended to stop smoking\(^{(7)}\). Another barrier found is the belief that the intervention could interfere in the withdrawal of other substances\(^{(8)}\) despite the fact that in the literature it has been described that they show a good evolution in the prognosis of the treatment\(^{(9,10)}\). A widespread idea is that individuals who abuse other substances do not show interest in a tobacco detoxification treatment. However, studies have documented that between 47% and 80% of drug-dependent individuals are interested in quitting smoking, regardless of whether they are hospitalized or followed up at community level\(^{(11)}\).

According to the literature, one of the most appropriate moments to perform a motivational intervention to stop smoking is that in which individuals are admitted to hospitalization units where smoking is not allowed as they show greater predisposition to quit smoking in the future and they are more successful in the smoking cessation\(^{(12,13)}\).
This reality means that the role of health personnel is considered of vital importance for the intervention in the consumption of tobacco in this population. Several studies recognize nursing as an essential profession with conditions to address this issue both in the general population and in the population with a mental disorder due to the direct attention it provides, the therapeutic relationship, and its ability to communicate with other members of the team multidisciplinary and integral approach present in their daily practice\(^\text{(14,15)}\).

In this way, a brief psychoeducational intervention in individuals in the detoxification phase within a smoke-free environment will generate motivation for a later cessation of the smoking habit or a reduction of the consumption in its defect.

The objective of the study is to evaluate the degree of motivation for the smoking cessation of the individuals admitted to a UHD after performing a brief psychoeducational intervention on the approach to smoking.

**METHODOLOGY**

The study follows a scientific methodology based on quantitative research of a quasi-experimental analytical type. It is carried out by means of two experimental cohorts, of the pre- and post-intervention type. The intervention is applied to individuals, evaluating the differences in the motivation for smoking cessation in one group before the intervention and in another group after the intervention. It is a brief educational intervention of one hour per week, where various aspects related to smoking are discussed (legislation, myths and barriers, consequences of habit, benefits of quitting smoking, motivational factors of abandonment, etc.) from a motivational perspective and participatory of individuals.

This research has focused on individuals who are admitted to a Hospital Detoxification Unit (UHD), specifically in the UHD of the Institute of Neuropsychiatry and Addiction of the Consorci Mar Parc de Salut in Barcelona, which consists of 5 beds; it is voluntary and scheduled income, with an average stay of 13 days. It recommends the admission of those individuals who present great difficulties to perform detoxification on an outpatient basis, due to multiple previous failures, organic diseases, absence of social support, addiction to several Substances or possibility of severe withdrawal syndrome. The objectives that are established are the treatment of substance addiction, the distancing of the usual means of consumption to facilitate the later inclusion in a relapse prevention program, the study, treatment and follow-up of the organic complications and possible associated psychiatric disorders, and the assessment of the psychological and social factors that may have favored the start and maintenance of consumption. The abstinence to the substance consumed is focused using pharmacological treatment, which aims to avoid the symptomatology of abstinence present after the suppression of the substance and / or mitigate it if it has already been established. The pharmacological treatments are diverse and varied, depending on the substance that is intended to be eliminated from the organism, smoothing the symptomatology of abstinence and improving the subsequent psychotherapeutic approach. From a motivational approach, we work on disease awareness and relapse prevention. At hospital discharge, the individual is referred or referred to the home with follow-up at their referral center; to a specific day center of addictive behavior or a therapeutic community. The hospital where this unit is located (Hospital del Mar)
belongs to the Xarxa Catalana d'Hospitals sense fum (Network of Smoke Free Hospitals of Catalonia).

Patients who agreed to participate in the study were administered a questionnaire that collected sociodemographic data, as well as the severity of nicotine addiction through the Fieström Nicotine Dependence Test\(^{(16)}\) and the motivation to stop smoking. Smoke with the Richmond Motivation Test\(^{(17)}\).

The Fieström Nicotine Dependence Test measures the degree of nicotine dependence through a one-dimensional self-administered scale of six items with a score of 0 to 10. This instrument mainly measures the physical dependence of the substance. Validated and reliable scale. Evaluation and interpretation: Each answer has a score obtaining a final total score. A score lower than 4 indicates a low dependence on nicotine, a score between 4 and 7 is interpreted as a moderate dependence and a score higher than 7 is a high dependency.

The Richmond Quit Smoking Motivation Test measures the degree of motivation to quit smoking through a one-dimensional self-administered scale of six items with a score of 0 to 10. It allows individuals to be placed in the Prochaska stages of change and DiClemente, fact that allows to determine the type of intervention to be carried out in each user (motivational intervention or sensitization, set a D-day, etc.). Validated and reliable scale. Each answer has a score getting a total score at the end of the questionnaire. A score of 3 or less indicates a low degree of motivation; a score between 4 and 6 a moderate motivation; and a score between 7 and 10 is interpreted as a high degree of motivation.

The criteria for inclusion of the study are:

- Users over 18 years old
- Users admitted to the Hospital Detoxification Unit of the Institute of Neuropsychiatry and Addictions of the Mar Parc de Salut Consortium of Barcelona.
- Users who are smokers
- Users who agree to participate voluntarily in the study and sign the Informed Consent

The study was carried out between the months of January to October of the year 2017, where a sample size of 38 individuals was collected (19 participants in the pre-intervention group and 19 participants in the post-intervention group).

**RESULTS**

The average age is 47.5 years and a percentage of men of 68.4% of the total participants.

The main drugs that are the reason for admission are in 62.2% of individuals alcohol, 21.6% cannabis, 18.9% of the sample cocaine consumption and the same percentage (18.9%) for consumption of heroin and 13.5% go for benzodiazepine detoxification. In 34.2% of individuals there is a polydrug use.
The smokers in the sample were n = 32 (84.2%) with an average score in the Fieström Nicotine Dependence Test of 6.51; equivalent to a moderate dependence, an average age of initiation of the tobacco habit of 16 years and an average consumption of 24.2 cigarettes per day at present. Of the 6 individuals (15.8%) currently non-smokers, 5 of them (83.3%) are ex-smokers for 7 years on average. Only one individual in the sample has not developed criteria for addiction to nicotine.

Of the smoker population, 53.1% have tried to quit at some point, with an average of 9.1 months of smoking cessation. There are several reasons that precipitated the attempt: 35.2% due to health problems (mainly respiratory and/or tumor), 17.6% coincided with a pregnancy and/or stage of breastfeeding, 17.6% related to period of admission, either hospital or therapeutic community, 11.7% for family reasons (especially children), 11.7% for economic issues and 5.8% for other reasons. Of these, 66.7% of the sample stopped smoking without any help. 27.8% relied on Nicotine Substitution Therapy (chewing gum and/or patches) and 5.6% used other techniques (self-help books, acupuncture or hypnosis). A time of abstinence of 4.05 months has been observed in those individuals who have used some kind of help compared to those who did not use any help to quit.

During hospital admission, 81.2% of smokers used Nicotine Substitution Therapy to prevent and/or control the nicotinic withdrawal syndrome. The proportion of nicotine supplements is 59.4% in chewing gum format (2 and 4 mg), 6.3% in patches (all 21 mg), 3.1% candies (2mg) and 12.5% used more than one nicotinic supplement (patch and chewing gum or patch and candy). The remaining 18.8% did not use any type of external aid to mitigate nicotine withdrawal symptoms.

31.2% of smoking individuals were interested in quitting smoking, that is, they were in the contemplative stage within the Prochaska Transitional Model of Change and Diclemente, which is characterized by ambivalence about smoking behavior. Individuals recognize concerns or the existence of problems related to the action of smoking and considers the possibility of quitting in the following six months. 6.25% of the sample are in the preparation stage, since they refer that "taking advantage of income, I take everything out", and the remaining 62.55% are in the precontemplative stage of the same model, in which Individuals do not consider a change in smoking behavior.

There are differences in the degree of motivation found in individuals with respect to experimental groups. The individuals belonging to the pre-intervention group obtained a score of 4.20 for the Motivation Test to stop smoking in Richmond (moderate/low motivation), compared to the post-intervention group who obtained a score of 5.47 for the same test (moderate motivation) with a difference of 1.27 points between both groups, although the differences are not significant.

**DISCUSSION**

The most outstanding result of this pilot study is the improvement of motivation to stop smoking in patients admitted for detoxification and who receive a brief intervention focused on tobacco consumption. In the general population, the percentage of subjects who want to quit smoking is 35% compared to 31.2% of the individuals in this sample, which shows that the motivation to quit smoking is similar in the psychiatric population in the general population. 30% of smokers in the general population have
made at least one attempt to quit smoking compared to 53.1% of the sample in this study; similar to the proportion of individuals with a mental disorder who try to quit tobacco from other studies such as 47% of the Hall sample on al.(18) or 48% of the study by Prochaska et al.(19)

According to the National Health Survey 2011-2012, 24% of the general population is a smoker compared to 84.2% of the sample in this study. This result coincides with that obtained in other studies, where the smoking habit is higher in the population with a mental disorder(20). More specifically, in a study conducted on a sample of patients with other additions who started treatment in drug addiction centers in Catalonia (N = 246)(11), it was observed that 88% of the patients were smokers and only 4% ex-smokers, data similar to those found in this sample except that in ex-smokers the percentage rises to 13.1%. The average consumption was 26 cigarettes / day, compared to 24.2 cigarettes in the individuals in this study, with people with alcohol problems being those who smoked the most. From the application of the brief motivational intervention for smokers, effects were observed in the increase of the level of motivation to stop smoking, increasing the discrepancy and ambivalence regarding their consumption. The brief intervention in this study not only had relevant effects in users with low dependence, but also in users with severe dependence on nicotine (according to the Fagerström Questionnaire of nicotine dependence). The results obtained in this sample are consistent with the data obtained in the application of brief interventions from other studies(21-23).

Regarding the use of some type of help to stop smoking and its effectiveness in abstinence, the results found in the study have been 4.05 months higher for individuals who have tried to quit using some method, or TSN, self-help manual or alternative methods, regarding those individuals who have tried to stop smoking without any help. These data corroborate that of other studies. It has been proven that Nicotine Replacement Therapy increases the probability of achieving abstinence percentages of up to 70%(24,25). However, self-help materials alone have proven to be of little use, although this is greater than not using any method(26). The studies that support the combination of using a pharmacological treatment and a psychoeducational intervention on smoking to achieve a higher percentage of individuals who quit smoking and a longer period of abstinence(26).

This study has a series of limitations, among them it does not follow up after the intervention and after the hospital discharge; similarly, it is reduced to a specific sample of users with a substance dependence disorder. It would be interesting for future research to expand the sample size and select individuals from the hospitalization and the community and perform a follow-up.

CONCLUSIONS

The findings of this study suggest that it is necessary to modify the conventional opinion that people with psychiatric illness or addictive disorders are unable to stop smoking because they lack the motivation to do so. Although it is true that drug addicts are smokers with high levels of nicotine dependence for whom it is necessary to design appropriate cessation strategies, in order to obtain the maximum possible effectiveness. Health professionals have an important role to play in interventions aimed at reducing tobacco-related harm. Getting smoking to be a focus of therapeutic interventions of professionals is a path we must achieve.
REFERENCES

2. Lasser, K; Boyd, JW; Woolhandler, S; Himmelstein, DU; McCormick, D; Bor, DH. Smoking and mental illness—a population-based prevalence study. Journal of the American Medical Association 2000; 284:2606–2610.
5. Rodeiro SV. Influencia de la presencia de patología psiquiátrica en la cesación tabáquica Estudio de los pacientes tratados. Universidad de Cantabria; 2016.
6. Hurt, RD; Offord, KP; Croghan, IT; GomezDahl, LC; Kottke, TE; Morse, RM; et al. Mortality following inpatient addiction treatment: Role of tobacco use in a community based cohort. Journal of the American Medical Association 1996; 275:1097-1103.
17. Richmond RL. Multivariate models for predicting abstention following intervention to stop smoking by general practitioners. Addiction 1993; 88: 1127-35.


24. Barrueco Ferrero, M; Jiménez Ruiz, C; Palomo Cobos, L; Torrecilla García, M; Romero Palacios, P; Riesco Miranda, JA. Abstinencia puntual y continuada con el tratamiento farmacológico del tabaquismo en la práctica clínica. Medicina Clínica 2004;123(17):652-56.
