

Self-quitting in a Spanish sample. An exploratory study

Autoabandono del tabaco en una muestra española. Un estudio exploratorio

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The consumption of tobacco is a serious public health problem, mainly due to its relationship with cardiovascular disease and with different types of cancer (Bjartveit & Tverdal, 2009). In order to reduce the prevalence of smoking, different types of treatment, both pharmacological and psychological or a combination of both, have been tested but the degree of success of such treatments varies a lot depending on the different studies (Raich et al., 2015; Thomsen, Villebro, & Moller, 2014). Quitting the consumption of tobacco without professional help (*self-quitting*, in the English terminology) has received less attention, although it is the main method of smoking cessation used by most smokers who try to quit smoking, and it is estimated that 95% of smokers are successful with this method (Schater, 1990). Other scholars of the topic report more modest numbers, which range from 54 to 69% of smokers who have managed to quit smoking through self-quitting (Smith, Chapman, & Dunlop, 2015). The present study aims to perform an exploratory analysis of the variables that may help explain the success or failure of smoking cessation by means of self-quitting. This study obtained the favorable report of the Committee of Bioethics of the University of Almería, whose of reference number is UALBIO2011/025.

The participants of the study were recruited through ads in press and radio and health centers. They were interviewed in order to record different variables related to the consumption of tobacco, such as age at onset, age at quitting, years of tobacco use, number of cigarettes per day, and nicotine dependence. We also assessed the presence

of behavioral repertoires related to personal self-regulation, such as self-control, understood as the ability to control interference derived from internal events, measured through of the Self-control Questionnaire of Rosenbaum, (Capafóns, 1989) and psychological inflexibility, or the inability to be in touch with functionally aversive private events, whether they be sensations, emotions, memories, thoughts, etc. and the performance of behaviors that change the form and/or frequency of these events, measured with the Acceptance and Action Questionnaire (AAQ-II), Spanish version of Ruiz, Langer, Luciano, Cangas, and Beltrán (2013). We assessed the carbon monoxide (CO) in exhaled air of the participants who stated they were abstinent, by means of a Bendfont co-Oximeter. Participants had to achieve an outcome equal to or lower than 5 bpm (particles per million) to be assigned to the group of former smokers.

We used the Kolmogorov-Smirnov *Z* and Student *t* statistics to contrast the arithmetic means.

We selected 137 participants, of whom 99 (72.2%) had been abstinent for a period of more than six months at the time of the interview (Former smokers); and 38 (27.7%) active smokers, who had ceased smoking for at least six months, by means of the self-quitting strategy (Relapsed smokers).

As shown in Table 1, of all the variables related to the history as a smoker used in the present study, only the mean age at quitting was significant, being higher in the case of those who remained abstinent (36.35 vs. 29.77 years). With regard to the measures of self-control and psychological

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Table 1. Variables related to smoking.

	Former smokers	Relapsed smokers	Kolmogorov-Smirnov Z (p)
Nr. of cigarettes/day: Mean (SD)	16.62 (10.21)	14.24 (5.23)	.86 (.447)
Age at first tobacco use: Mean (SD)	16.45 (2.80)	14.88 (5.50)	1.33 (.056)
Years as a smoker: Mean (SD)	19.29 (10.91)	14.99 (10.77)	1.28 (.76)
Age at quitting: Mean (SD)	36.35 (10.93)	29.77 (9.65)	1.63 (.01)*
Dependence (Fagerström): Mean (SD)	3.51 (2.37)	3.53 (2.10)	.484 (.973)

Nota. **p £ .05.

inflexibility, they were statistically different, as a function of the group of former smokers or relapsed smokers (27.72 vs. 19.97, $t = 2.198$, $p \text{ £ } .001$, for self-control; and 23.46 vs. 25.36, $t = -3.41$, $p \text{ £ } .030$, for psychological inflexibility, for former and relapsed smokers, respectively).

These results show that there were no differences in a large part of the habits related to tobacco consumption, except for age at quitting in smokers who use some kind of treatment, which coincides with the results obtained in other works (Gregor & Borrelli, 2012; Raich et al., 2015). It is possible that increased age leads to an increase in the aversive consequences derived from the consumption of tobacco and this would facilitate their quitting. In relation to self-control, the data obtained coincide with other contributions of authors about the benefit that programs of self-control can contribute to the treatment of smoking (Chiou, Wu, & Chang, 2013). Regarding psychological inflexibility, it could be a factor to take into account due to its predictive value in the success of self-quitting, coinciding with Roales-Nieto et al. (2016). In spite of this, it should be noted that the participants in the present study reported a low nicotine dependence, which could facilitate the initiation of self-quitting, in line with Linchestein and Cohen (1990). The data obtained may have some limitations due to the possible bias in the participants' information. On another hand, the selection of the participants was not random due to the difficulty to access them. Treatments that include the approach of self-control and psychological inflexibility could increase the rates of success in the psychological treatments of smoking.

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Conflict of interests

The authors declare the absence of conflicts of interest.

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