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DEPRESSIVE SYMPTOMATOLOGY IN SMOKERS WITH PERSONALITY DISORDERS WHO PARTICIPATED IN A PSYCHOLOGICAL TREATMENT PROGRAMME FOR SMOKING CESSATION

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RESUMEN

El presente estudio analiza la presencia de sintomatología depresiva en una muestra de 202 fumadores con y sin trastornos de personalidad que acuden a un tratamiento psicológico para dejar de fumar. Los resultados encontrados indican que el grupo de fumadores con trastornos de personalidad presentó más síntomas depresivos que el grupo de fumadores sin trastornos de personalidad, tanto al inicio del tratamiento como al finalizar el mismo. Este hallazgo confirmaría la frecuente asociación entre trastornos del Eje II y malestar emocional, producto del deterioro del funcionamiento general del sujeto por causa de los patrones de comportamiento inflexibles característicos de los trastornos de personalidad.

Palabras clave: depresión, trastornos de personalidad, dejar de fumar, BDI-II

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ABSTRACT

The present study analyzes the presence of depressive symptomatology in a sample of 202 smokers with and without personality disorders who participate in a psychological treatment programme for giving up smoking. The results indicate that the group of smokers with personality disorders presented more depressive symptoms than the group of smokers without personality disorders, both at the start and at the end of the treatment. This finding would confirm the widely found association between Axis II disorders and emotional distress, resulting from the deterioration of the individual's general functioning due to the inflexible behaviour patterns characteristic of personality disorders.

Key words: depression, personality disorders, smoking cessation, BDI-II

INTRODUCTION

Cigarette smoking is the main cause of morbi-mortality worldwide, causing some 5 million deaths a year (World Health Organization, 2008). Apart from its close association with physical illnesses, smoking is related to various psychopathological disorders. The majority of research has focused on the relationship between smoking and history of major depression, findings in clinical samples showing that between 25% and 61% of smokers have suffered from a depressive disorder at some time in their life (Becoña, 2003; Becoña & Míguez, 2004; Wilhelm, Wedgwood, Niven & Kay-Lambkin, 2006). Such studies have led tobacco smoking to be considered as a risk factor for depression (Pasco, Williams, Jacka, Ng, Henry, Nicholson et al., 2008). People with a history of depressive disorder are more likely to be smokers and to be nicotine-dependent, have greater difficulty giving up smoking and are at greater risk of suffering mood alterations when they do give up the habit (Breslau, Kilbey & Andreski, 1992; Dierker & Donny, 2008; Gurrea & Pinet, 2004; Hughes, 2007; Leventhal, Kahler, Ray & Zimmerman, 2009; Schmitz, Kruse & Kugler, 2003; Vázquez, Becoña & Míguez, 2002). Moreover, both history of major depression and depressive symptoms are associated with higher failure rates in attempts to give up smoking (Anda, Williamson, Escobedo, Mast, Escovino & Remington, 1990; Glassman, Helzer, Covey, Cottler, Stetner, Tipp & Johnson, 1990), higher levels of negative affect during abstinence syndrome (Covey, Glassman & Stetner,

1997) and higher relapse rates (Kinnunen, Doherty, Militello & Garvey, 1996). Previous research has shown that even low levels of depressive symptomatology may be associated with difficulties for giving up smoking and greater persistence of nicotine dependence (Hitsman, Borrelli, McChargue, Spring & Niaura, 2003; Niaura, Britt, Shadel, Goldstein, Abrams & Brown, 2001).

Smoking has also been associated with Axis II personality disorders. However, the results are inconsistent as regards the prevalence of these disorders in smokers, with percentages ranging from 9% (Black, Zimmerman & Coryell, 1999) to 45% (Lasser, Wesley, Woolhandler, Himmelstein, McCormick & Bor, 2000). This great variation is due in part to the methodology used, to sample heterogeneity and to the definition of smoker status used in each study (Fernández del Río & Becoña, in press). Nor is there consensus in the literature about the influence of personality disorders on the efficacy of therapeutic intervention. Thus, while some studies conclude that having an associated personality disorder is a predictor variable of treatment failure in addictive behaviour (Verheul, van den Brink & Hartgers, 1998), others have shown that Axis II psychopathology, despite being associated with pre- and post-treatment problems, does not constitute a robust predictor of the result of intervention in substance users, and that these individuals may benefit from clinical intervention at least as much as people without an associated personality disorder (Alterman, Rutherford, Cacciola, McKay & Boardman, 1998; Cacciola, Alterman, Rutherford, Alterman, McKay & Snider, 1996; Crits-Cristoph, Siqueland, Blaine, Frank, Luborsky, Onken, et al., 1999).

Furthermore, it is known that the majority of individuals with a personality disorder also have Axis I mental disorders (Skodol, 2007). This comorbidity of Axis I and Axis II disorders ranges from 66% to 100% (Dolan-Sewell, Krueger & Shea, 2001), and often complicates therapeutic intervention (Torrens, 2008). Indeed, people with personality disorders commonly seek specialist help owing to the development or exacerbation of an Axis I disorder. Such individuals often experience considerable family, employment and interpersonal problems, resulting from their scarce flexibility and adaptability (Caballo, 2004). People with personality disorders possess hardly any alternative strategies for relating to others, using the strategies they have in a rigid fashion, and find it hard to adapt to change, tending to create vicious circles and to modify their environment so that it does not make demands on them that are outside

their usual repertoire (Millon & Everly, 1994). Therefore, it is common for such individuals to suffer depressive symptoms resulting from the deterioration of their general functioning (Eurelings-Bontekoe, van der Slikke & Verschuur, 1997). Nevertheless, some studies have reported that the presence of depressive symptoms, at least in some individuals with personality disorders, is associated with better treatment results, insofar as the distress caused by such symptoms serves as motivation to seek treatment, which would facilitate the modification of maladaptive behaviours characteristic of Axis II disorders (Shea, Widiger & Klein, 1992).

If we add to the frequent comorbidity between depressive disorders and personality disorders the antidepressant effects of nicotine (Salín-Pascual, Rosas, Jiménez-Genchi, Rivera-Meza & Delgado-Parra, 1996), it is to be expected that smokers with Axis II disorders will experience greater depressive symptomatology at the beginning of a psychological treatment programme for giving up smoking, at the end of the programme and at the 12-month follow-up.

The aim of the present study is to assess the presence of depressive symptomatology in smokers with and without personality disorders who participate in a psychological treatment programme for giving up smoking.

METHOD

Participants

The sample was made up of smokers who requested smoking cessation treatment at the Smoking Addiction Unit in the Psychology Faculty of the University of Santiago de Compostela (Spain) between October 2006 and February 2008. Inclusion criteria for the study were: age 18 or over; freely wishing to take part in the treatment; smoking at least 10 cigarettes per day prior to starting the treatment; and properly filling out all the questionnaires in the pre-treatment assessment. Exclusion criteria were: diagnosed severe mental disorder (bipolar disorder and/or psychotic disorder); concurrent dependence on other substances (cocaine and/or heroin); having participated in the same psychological treatment programme or in a similar one during the previous year; having received some other type of effective treatment for giving up smoking (nicotine replacement therapy, bupropion, varenicline) in the previous year; presence of some physical pathology involving high life-risk

for the individual, which would require immediate intervention on an individual format (e.g., recent heart attack, pneumothorax); and failure to attend the first group session of treatment. Of an initial sample of 243 individuals, 41 were excluded on the basis of the previously-mentioned exclusion criteria, so that the final sample was composed of 202 cigarette smokers (43.1% men and 56.9% women). Mean age was 43.99 years (S. D. = 10.70). At the start of the treatment programme they smoked a mean of 24.32 cigarettes per day (S. D. = 10.22).

Instruments

All the smokers were assessed by means of the Cuestionario sobre el hábito de fumar [Questionnaire on the smoking habit] (Becoña, 1994), which gathers information on sociodemographic variables and smoking-related data.

For the assessment of the personality disorders we used the screening questionnaire of the IPDE (International Personality Disorder Examination, Loranger, 1995), DSM-IV Module. Loranger, Janca and Sartorius (1997) set the cut-off point at three positive items or more, for considering each category as significant, but this rather low cut-off point, while improving the sensitivity of the instrument, markedly increases the number of false positives. Authors such as Lewin, Slade, Andrews, Carr and Hornabock (2005) proposed using the ICD-10 diagnostic criteria for each personality disorder as a solution for increasing the specificity of the screening questionnaire. In the present study, and basing ourselves on the study by Lewin et al. (2005), we adopted as cut-off points for the screening questionnaire of the IPDE, DSM-IV Module, the DSM-IV diagnostic criteria (American Psychiatric Association, 1994) for each personality disorder.

Depressive symptomatology was assessed by means of the BDI-II (Beck Depression Inventory, second version; Beck, Steer & Brown, 1996; in its Spanish version by Sanz, Perdigón & Vázquez, 2003), which assess the presence of depressive symptoms in the two weeks prior to the pre-treatment assessment. In the present study we used a score of 19 as a cut-off point to speak of moderate or severe depressive symptomatology (Beck et al., 1996).

Depressive symptomatology was assessed prior to the start of the psychological smoking cessation treatment, at the end of it and at the 12-month follow-up. Although all participants took part in the pre-treatment assessment, the assessment at the end of the treatment pro-

gramme was obtained from 165 individuals (37 failed to attend the final session), and that for the 12-month follow-up from 188 individuals (14 could not be located).

Procedure

The initial assessment of all the smokers was carried out in a single session, which involved the application of all the instruments described above. All the smokers signed the informed consent to take part in the study. The Bioethics Committee of the University of Santiago de Compostela gave its authorization for the study to be carried out.

Duration of the treatment programme was 6 weeks (one session per week lasting around 1 hour), and participants were treated in groups of between 2 and 8. The treatment was applied by two psychologists with several years of experience in the treatment of smokers.

The psychological treatment carried out was the Programa para dejar de fumar [Smoking Cessation Programme] (Becoña, 1993, 2007). This is a cognitive-behavioural treatment consisting of six sessions in group format. This treatment involves the following elements: treatment contract, self-report and graphic representation of cigarette consumption, general information on tobacco, stimulus control, activities for avoiding nicotine withdrawal syndrome, physiological feedback on cigarette consumption (measurement of carbon monoxide in expired air in each session), gradual reduction of nicotine and tar ingestion (nicotine fading), and relapse-prevention strategies (training in assertiveness, problem-solving, change of mistaken beliefs, anxiety and anger management, physical exercise, weight control and self-reinforcement).

At the end of the treatment we once again administered the BDI-II, with the aim of assessing the presence of depressive symptomatology associated with giving up smoking (n = 165). At the 12-month follow-up we applied a follow-up questionnaire according to the status of the participant at that moment (smoker/nonsmoker), in addition to the BDI-II (n = 188).

RESULTS

On analyzing the relationship between depressive symptomatology at the start of the treatment and the presence of at least one personality disorder, we found statistically significant differences on the BDI-II

Table 1. Percentage of individuals with suspected depression (BDI-II) according to the presence of a personality disorder (screening IPDE pre-treatment)

	Suspected depression (BDI-II ≥ 19)				
	With PD (n = 126)		Without PD (n = 76)		
	n	%	n	%	χ^2
Pre-treatment assessment (n = 202)	27 27	21.4	2	2.6	13.623***
Assessment at end of treatment (n = 165)	11	10.8	1	1.6	4.885*
12-month follow-up assessment (n = 188)	22	18.8	7	9.9	2.710

*p < .05; ***p < .001

($\chi^2_{(1)} = 13.623$, $p \leq .001$). The smokers with personality disorders have more depressive symptomatology prior to starting the smoking cessation treatment than those without personality disorders (21.4% and 2.6%, respectively) (Table 1).

At the end of the smoking cessation treatment, the scores of those with personality disorders are also higher on the BDI-II ($\chi^2_{(1)} = 4.885$, $p \leq .05$). At that point, 10.8% of smokers with personality disorders present suspected depression, compared to 1.6% of the initial group of smokers without personality disorders.

At the 12-month follow-up, no statistically significant differences were found on the BDI-II between participants with and without personality disorders.

As regards status of the individual at the 12-month follow-up (smoker, nonsmoker) according to the presence of personality disorders and BDI-II, we found significant differences in the pre-treatment assessment ($F_{(4,201)} = 11.001$, $p \leq .001$), where the smokers with personality disorders score higher (12.87) than the other groups. The Scheffé *post hoc* test revealed significant differences between smokers with personality disorders and smokers without personality disorders ($p \leq .001$) (Table 2).

With regard to the BDI-II at the end of the treatment, we also found significant differences ($F_{(4,164)} = 6.169$, $p \leq .001$), insofar as the smokers with personality disorders scored higher (9.04) than the rest of the groups. The Scheffé *post hoc* test revealed differences between the smok-

Table 2. Mean scores on the BDI-II at the different treatment points, according to the presence or absence of a personality disorder (PD) and smoker status at 12 months

	Smokers 12m follow-up (n = 163)		Nonsmokers 12m follow-up (n = 39)		
	Without PD	With PD	Without PD	With PD	F
Pre-treatment assessment (n = 202)	5.29	12.87	6.69	10.31	11.001***
Assessment at end of treatment (n = 165)	4.98	9.04	2.33	7.88	6.169***
12-month follow-up assessment (n = 188)	7.02	11.62	4.69	7.92	5.342***

***p < .001

ers with and without personality disorders ($p \leq .001$), and between the smokers with personality disorders and the nonsmokers without personality disorders ($p \leq .01$).

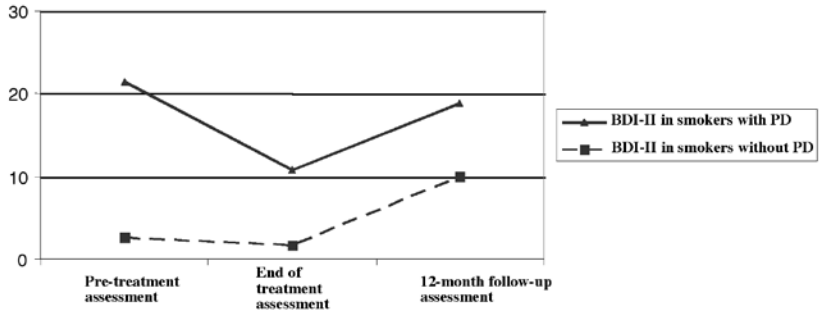
Finally, we found statistically significant differences in depressive symptomatology at the 12-month follow-up ($F_{(4,187)} = 5.342$, $p \leq .001$). Notable once more at this assessment point are the smokers with personality disorders (mean score on the BDI-II = 1.62). The Scheffé *post hoc* test revealed significant differences between the smokers with and without personality disorders ($p \leq .01$), and between the smokers with personality disorders and the nonsmokers without personality disorders ($p \leq .05$).

Although the required statistical significance was not attained, individuals with personality disorders who were abstinent at 12 months scored higher on the BDI-II, at all time points, than abstinent individuals without personality disorders (e.g., 10.31 versus 6.69, mean scores on the BDI-II of participants abstinent at 12 months, with and without personality disorders, respectively).

DISCUSSION

The results obtained in the present study support the hypothesis that smokers with personality disorders present greater depressive symptomatology prior to starting a psychological treatment for giving up

Figure 1. Percentage of individuals with suspected depression according to the BDI-II at the different points of the treatment, according to presence or absence of a personality disorder (PD).



smoking. This may be related to the distress associated with the inflexible behaviour patterns characteristic of personality disorders, which cause deterioration of interpersonal and employment relationships (Caballo, 2004; Millon & Davis, 1998).

On the other hand, individuals with personality disorders experienced greater depressive symptomatology at the end of the smoking cessation treatment than those without Axis II psychopathology. Although nicotine has an antidepressant function (Murphy, Horton, Monson, Laird, Sobol & Leighton, 2003), its chronic use leads to neuroadaptation, with increased depressive symptoms if consumption is interrupted (Gurrea & Pinet, 2004). Various studies have indicated that between 3% and 20% of smokers develop clinical depression between the first 3 and 26 weeks of abstinence (Hughes, 2006). In the present study, the percentage of participants with personality disorders presenting depressive symptomatology was lower than at the pre-treatment assessment. After six sessions of the psychological treatment, these smokers experienced a slight improvement in their mood. However, at the 12-month follow-up they had attained levels of depressive symptomatology similar to those of the pre-treatment assessment (Figure 1).

The results of the present study would indicate that smokers with some associated personality disorder experience more depressive symptoms before trying to give up smoking and after having done so, even though they may remain abstinent 12 months later; this would support the idea that Axis II psychopathology tends to be accompanied by

notable emotional distress (Skodol, 2007), expressed through depressive symptoms (Eurelings-Bontekoe et al., 1997). Although at the end of the treatment programme the percentage of participants with depressive symptomatology decreased with respect to the pre-treatment assessment, the percentage was higher in the group with personality disorders, and therefore their distress continues to be significantly higher than that of the smokers without personality disorders.

This study is not without its limitations. First of all, the decrease in sample size at the end of the treatment and at the 12-month follow-up (owing to failure to attend the final session or failure to locate the participant) may have affected the statistical analysis carried out. Also, the assessment of personality disorders was carried out using a self-report instrument: the IPDE screening. However, the cut-off point of this instrument was increased until its adjustment to the DSM-IV diagnostic criteria for each personality disorder. It would be necessary in future research to make use of the complete clinical interview of the IPDE (Loranger, 1995) or of other diagnostic interviews, such as the SCID-II (First, Gibbon, Spitzer, Williams & Smith-Benjamin, 1996). Depressive symptomatology was also assessed by means of a self-report questionnaire, the BDI-II, though this is indeed the world's most widely used assessment instrument in research on depression.

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