

Smoking cessation interventions in substance use disorders treatment centers of Catalonia: The abandoned addiction

Intervenciones para dejar de fumar en los centros de atención a las drogodependencias de Cataluña: La adicción abandonada

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Abstract

Substance use disorders (SUD) treatment centers are an optimal setting for delivering smoking cessation interventions (SCI). This study aimed to examine the adoption of SCI in SUD treatment centers in Catalonia (Spain) as well as to assess their managers' views on the appropriateness and feasibility of providing SCI. Managers directly in charge of SUD treatment centers (n = 57) answered a 30-item on-line questionnaire. Data was obtained of 50 centers (87.7% response rate). Forty-six per cent of the centers provided some kind of SCI, but only 4.8% of the new patients were treated for smoking cessation. Managers reported that 73.3% of mental health professionals working in SUD centers had not been trained in SCI. Sixty-four per cent of managers agreed that all health professionals should deliver SCI. Those centers offering SCI attended more patients and were more likely to have professionals trained in SCI than those not offering SCI. The implementation of SCI in SUD treatment centers in Catalonia was suboptimal. Continuing education and training should be provided

Resumen

Los centros de tratamiento de drogodependencias son un recurso óptimo para realizar intervenciones para la cesación tabáquica (ICT). El objetivo de este estudio fue examinar la implementación de ICT en la red de centros de atención a las drogodependencias (CAS) de Cataluña, así como evaluar las opiniones sobre la adecuación y viabilidad de la provisión de ICT. Los responsables de los CAS (n = 57) contestaron un cuestionario on-line compuesto por 30 ítems. Se obtuvieron datos de 50 centros (87,7% tasa de respuesta). El 46% de los CAS ofrecía algún tipo de ICT, pero sólo un 4,8% de los nuevos pacientes eran tratados para dejar de fumar. Además, los responsables informaron que el 73,3% de los profesionales que trabajaban en los CAS no había recibido formación en ICT. El 64% de los responsables estaba de acuerdo que todos los profesionales deberían realizar ICT. Aquellos centros que ofrecían ICT visitaban más pacientes y era más probable que tuviesen profesionales formados en ICT, comparado con los centros que no ofrecían ICT. La implementación de ICT en los CAS de Cataluña era subóptima. Se debería

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for all health professionals working in SUD centers. Not systematically delivering SCI to patients in treatment for other SUD means missing opportunities to reduce health and economic costs while perpetuating a smoking culture.

Keywords: Smoking cessation; substance-related disorders; substance abuse treatment centers; attitude of health personnel; education.

Smoking rates in people with Substance Use Disorders (SUD) are two to four times those of the general population reaching between 75% and 85% (Guydish et al., 2016). In addition, people with SUD smoke more cigarettes per day and develop higher levels of nicotine addiction than the general population, even compared with people with other psychiatric disorders (Grant, Hasin, Chou, Stinson & Dawson, 2004). Therefore, smoking-related morbidity and mortality is highly prominent in this population, as between 36% and 49% of all deaths are because of smoking-related conditions (Callaghan, Gatley, Sykes & Taylor, 2018). However, people with SUD are interested in quitting smoking when they are asked (Joseph, Nelson, Nugent & Willenbring, 2003; Nahvi, Richter, Li, Modali & Arnsten, 2006), and they can achieve long-term tobacco abstinence (Smith, Mazure & McKee, 2014). In fact, evidence-based interventions targeted at smokers in treatment or recovery for SUD increase tobacco abstinence (Apollonio, Philipps & Bero, 2016), and quitting smoking has a positive effect on substance use outcomes (McKelvey, Thrul & Ramo, 2017; Tsoh, Chi, Mertens & Weisner, 2011; Weinberger, Platt, Jiang & Goodwin, 2015).

Moreover, clinical practice guidelines encourage all clinicians, including those working in SUD treatment programs, to adopt evidence-based practices to treat tobacco dependence (Camarelles et al., 2013; Fiore et al., 2008; National Institute for Health and Care Excellence, 2013; R  ther et al., 2014). Indeed, outpatient SUD treatment centers are an optimal setting for delivering smoking cessation interventions (SCI), as integrating tobacco dependence treatment provides a consistent message targeting all substance dependencies. Moreover, these interventions are related to positive lifestyle changes, to the reduction of attendance problems and to achieving better abstinence rates compared with patients referred to an external cessation clinic (McFall et al., 2010).

However, smoking among people with SUD is too often overlooked, as four out of 10 mental health professionals (MHPs) perceive barriers to deliver smoking cessation interventions, have negative attitudes towards smoking cessation, and permissive attitudes toward smoking (Sheals,

facilitar formaci  n continuada a los profesionales de los CAS. No intervenir sobre el consumo de tabaco en pacientes en tratamiento por otras drogodependencias significa perder oportunidades para reducir costes en salud y econ  micos mientras perpetuamos una cultura fumadora.

Palabras clave: Dejar de fumar; trastornos por consumo de sustancias; centros de tratamiento de drogodependencias; actitud del personal sanitario; formaci  n.

Tombor, McNeill & Shahab, 2016). Smokers are also over-represented in MPHs working in SUD treatment services, which helps to normalize tobacco use. Additionally, those who smoke are less likely to deliver SCI (Pipe, Sorensen & Reid, 2009). Many of these issues contribute to perpetuate a culture of smoking among SUD treatment services (Bowman & Walsh, 2003).

A review on the implementation of SCI in SUD treatment centers in US found that although 86% of MHPs asked their patients about smoking, only 40% of patients were advised to quit or assessed for willingness to quit (Knudsen, 2017). However, little attention has been paid to these issues in Europe, with scarce studies conducted to assess the provision of SCI in SUD treatment centers. This study aims to examine the adoption of SCI in the SUD treatment centers in Catalonia (Spain), and briefly describe the SCI offered. We also assess their managers' views on the appropriateness and feasibility of the integration of SCI in the context of treatment for other addictions. Finally, we search for variables associated with delivering SCI.

Methods

Design, sample

Data for this cross-sectional study were collected between 2015 and 2016 through an on-line questionnaire. The survey target population was clinical managers directly in charge of SUD treatment centers. All these centers managed only outpatients.

There are 57 public SUD treatment centers in Catalonia (excluding those in penitentiary centers; $n = 2$). Catalonia is a territory of more than 7.5 million inhabitants in the north-east of Spain and SUD treatment centers attend to over 16,000 patients per year.

Measures

We designed an ad-hoc 30-item questionnaire to assess SCI and attitudes relating to smoking cessation within the context of other addictions. The questionnaire was developed in consensus among the professionals of the Tobacco Working Group of the Substance Abuse Treatment Network of Catalonia. The questionnaire (available at: [shor-](#)

turl.at/bnppv6) had four parts assessing different areas: 1) organizational characteristics, 2) characteristics of the SCI, 3) staff training in SCI and interest in receiving new training, and 4) managers' attitudes toward the appropriateness and feasibility of SCI provision in their centers. In part 1, 2 and 3, all questions were dichotomous (yes/no), asked for specific numbers (E.g., the number of professionals trained), or respondents could select multiple answers from a defined list of choices (E.g., the type of SCI provided). In part 4, attitudes were assessed on a 3-point Likert scale ranging from 1 = agree to 3 = disagree.

Additionally, authors classified SUD treatment centers by type (with or without supervised injecting facilities), location in a health care setting (i.e. hospital department, community mental health center, or freestanding), and municipality population (>50,000 inhabitants was considered big and <50,000 small).

Procedure

A complete list of public SUD treatment centers was obtained from the Health Department of the Catalan Government ($n = 57$). Managers were emailed with a letter of invitation explaining the overall goal of the survey which included a link to the survey. Non-respondents were re-invited by e-mail up to three times. A telephone call asking for participation was made after three reminders.

Data analyses

Descriptive statistics were computed in order to have a snapshot of the organizational characteristics of participating centers. Organizational characteristics, training, and attitudes were treated as independent variables and the provision of SCI as a dependent variable. To compare centers with a SCI and those without, Chi squared tests were used to determine relationships between categorical variables, and Student's *t*-tests for quantitative variables. Odds ratios (OR) with 95% confidence intervals (CI) were reported for binary variables. Cohen's *d* was calculated for significant differences for quantitative variables. Manager's views were compared with the Fisher exact test. All tests were two-tailed and conducted with an alpha of 0.05. SPSS version 20.0 for Windows was used for all statistical analysis.

Results

Data of 50 centers were obtained (87.7% response rate). Non-respondents did not give specific reasons for not answering. Among respondents, SUD treatment centers were very different in size: the average number of professionals (including non-clinical staff) was 9.6 (range 2-34, $n = 479$). Clinicians represented 89.8% of all staff. Overall, the most common occupation was psychiatrist (26.9%), followed by psychologist (20.9%), nurse (17.7%), social

worker (11.3%), and others (22.9%). All centers had at least a part-time psychiatrist and a part-time psychologist. One center had no nurse and two had no social worker. A total of 16,859 new patients were seen in all centers in the previous year (2014). The average of new patients for any SUD during 2014 was 344 (Standard deviation 337.5; range 0-1652).

Forty-six per cent ($n = 23$) of the SUD centers provided some kind of SCI (see table 1 for a description). Sixty-five per cent of them accepted patients for smoking cessation without other SUD. A total of 809 new patients were treated for smoking cessation, which represented 4.8% of all new patients in 2014.

Regarding training, 73.3% ($n = 315$) of all professionals had not received any training on SCI. On the other hand, 66% ($n = 33$) of the SUD treatment centers declared they were interested in receiving training.

In reference to manager's attitudes, 78% of managers agreed that "SCI in the SUD treatment centers complements primary care provision", and only 6% disagreed; 74% agreed with "people who want to quit smoking have the right to be treated in the SUD treatment centers", and only 2% disagreed; 74% agreed that "professionals who deliver SCI at SUD treatment centers need greater recognition and the authorities' support", whereas 8% disagreed; 67% agreed that "a common protocol needs to be created", whereas 12.5% disagreed; 60% agreed that "all professionals should be trained in SCI", whereas 12% disagreed; and finally 64% agreed with "all professionals should deliver SCI", whereas 10% disagreed (the rest neither agreed nor disagreed for each statement).

Centers delivering SCI attended to more patients than those not delivering SCI ($t = 2.5$; $df = 33$; $p = 0.018$), but no other differences were found. Regarding training, the former had more professionals trained in SCI ($t = 2.2$; $df = 47$; $p = 0.034$), although interest in training was not associated with delivering SCI. No significant differences were found in managers' views (table 2).

Discussion

According to our study, almost half of the centers that provided SUD treatment in Catalonia offered SCI. Centers that provided SCI attended more patients than those not delivering SCI. Most of them accepted patients without a SUD other than tobacco use disorder. SCI represented less than 5% interventions in new patients. Most centers reported prescribing smoking cessation medication, delivering motivational interview and individual counseling, however running smoking cessation groups was uncommon. On the other hand, only one out of four professionals had received training, and those centers with trained professionals were more likely to deliver SCI. Most managers agreed that all professionals should deliver SCI.

Table 1. Main characteristics of the Smoking Cessation Interventions delivered in the Substance Use Disorders Treatment Centers %(n).

Number of professionals who deliver SCI	
Physicians	32.5 (42)
Psychologists	23.9 (24)
Nurses	11.7 (10)
Social workers	3.7 (2)
Others	1.1 (1)
Year of starting delivering SCI, before 2000	52.2 (12)
Total time dedicated to deliver SCI, less than 10% of time	78.3 (18)
Type of intervention	
Motivational interview	65.2 (15)
Individual counseling	65.2 (15)
Group counseling	30.4 (7)
Use of smoking cessation medication	87 (20)
Time of follow-up, 12 months	39.1 (9)
Number of visits during the first three months, 3-5 visits	52.2 (12)
Targeted smokers	
General population	60.9 (14)
Population with smoking-related illness	60.9 (14)
Population with psychiatric disorders	65.2 (15)
Referrals	
Self-referrals	57.1 (12)
Primary care	66.7 (14)
Specialist physicians	57.1 (12)
Mental health centers	85.7 (18)
Occupational health	9.5 (2)
Waiting list	
Less than 1 month	73.9 (17)
Separated waiting list	34.8 (8)

There are only two previous studies on the subject conducted in Spain. Becoña et al., (2006) found that 55.6% of SUD treatment centers (with a 53% response rate) from 11 out of 17 autonomous regions of Spain (including Catalonia), offered SCI in 2004. This result is quite similar to that found in our study (55.6% vs. 46% in our study), although our results were obtained 10 years later. Moreover, important changes have occurred in these years in the field, as a total smoking ban in all health services (including psychiatric inpatient and outpatient SUD treatment services) came into force in 2011. Recently, improvements in tobacco control have occurred in Catalonia, such as increasing health professionals' awareness of the risks of smoking, training in smoking cessation, and achieving good compliance with the national smoking ban (Ballbè, Gual, Nieva, Saltó & Fernández, 2016). However, these improvements seem not to have changed SUD centers' practices. The other study conducted in Asturias (another autonomous region), found that only 20% of SUD centers delivered SCI (González-Roz et al., 2019). Disparities may reflect an inconsistent implementation of SCI across Spain.

According to our study, affiliation to hospitals was not associated with SCI delivery unlike some studies conducted in the US (Eby & Laschober, 2013; Eby, Laschober &

Muilenburg, 2015). Organizational differences may explain these results. Other variables associated with SCI such as non-profit organization, reimbursement or financial resources (Eby et al., 2015) could not be analyzed because all the centers surveyed were public and at the time of the study public healthcare in Catalonia did not cover smoking cessation medication.

Regarding training, our results are consistent with other studies concluding that trained professionals are more likely to deliver SCI (Carson et al., 2012), and that training is scarce and an unmet need in SUD centers (Knudsen, 2017).

Attitudes of managers' were not different according to the provision or not of SCI. Other studies found a more supportive attitude toward SCI by staff working in centers providing SCI, also centers serving pregnant women, but less supportive when centers had residential treatment (Fuller et al., 2007). However, in our study centers were more homogenous, as all centers accepted all populations and none delivered residential treatment. Therefore the role of those variables could not be analyzed.

This study addresses a topic scarcely researched in Europe, and also is the first to describe SCI in SUD centers in Catalonia. A high response rate (87.7%) is a strength. This study also elucidates managers' views regarding delivering

Table 2. *Organizational characteristics, staff's training and manager's views in Substance Use Treatment Centers by delivering or not smoking cessation interventions (n = 50).*

	SUD centers delivering SCI (n = 23) % or mean (SD)	SUD centers NOT delivering SCI (n = 27) % or mean (SD)	Cohen's d ¹	OR (95% CI) ²
Number of professionals				
Physicians	2.96 (2.36)	2.26 (1.38)		
Psychologists	2.3 (1.29)	1.76 (0.75)		
Nurses	1.76 (0.94)	1.67 (1.04)		
Social workers	1.08 (0.56)	1.09 (0.39)		
Others	2.15 (3.76)	2.22 (3.4)		
All	10.3 (6.7)	9 (5.84)		
New patients in 2014	468.48 (402.61)	234 (221.87)	0.72	
Big municipality (>50,000 inhabitants)	69.6%	51.9%		2.1 (0.66-6.8)
Centers with supervised injecting facilities	8.7%	25.9%		0.27 (0.05-1.47)
Located in a health setting	43.5%	25.9%		2.2 (0.67-7.2)
Number of professionals trained in smoking cessation	36 (21.01)	22.39 (22.39)	0.63	
Interested in receiving training in smoking cessation	56.5%	74.1%		0.45 (0.14-1.5)
Managers' attitudes				
(1) SCI delivered in SUD treatment centers complements primary care service, agree ³ .	78.3%	77.8%		
(2) People who want to quit smoking have the right to be treated in the SUD centers, agree.	69.6%	77.8%		
(3) Professionals who deliver SCI need greater public recognition and health authorities support, agree.	73.9%	74.1%		
(4) A common protocol on SCI needs to be created, agree.	52.2%	80%		
(5) All health professionals should be trained in smoking cessation, agree.	52.2%	66.7%		
(6) All health professionals at the SUD treatment centers should deliver SCI, agree.	60.9%	66.7%		

Note. ¹ Cohen's d was calculated for continuous variables. ² OR = odds ratio; CI = confidence interval; calculated for dichotomous variables.

³ Percentage of those who agree.

SCI from SUD centers for, according to the authors' knowledge, the first time in Spain. This study has also limitations. As a cross-sectional study, no information on change in the adoption of SCI over time is provided. Also, information is provided by managers, and the accuracy of the self-reported responses could not be verified. Finally, besides the high response rate, the sample size was low and may have affected results.

Future research should focus on the barriers of implementation of SCI in SUD centers. As training seems a key subject, continuing education and training should be provided and incentivized for professionals working in SUD centers. Additionally, a qualitative study of staff attitudes would improve the understanding of this matter. Also, as some evidence-based medications to quit smoking are financed since the beginning of 2020 by the Spanish public health ministry, new studies are warranted.

This study presents a large unmet clinical need. Conclusions should be a wake-up call for health authorities. Not systematically delivering SCI in patients in treatment for other SUD means losing opportunities to reduce tobacco and other drugs' costs while perpetuating a smoking culture.

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Conflict of interests

All authors declare they have no conflicts of interest.

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