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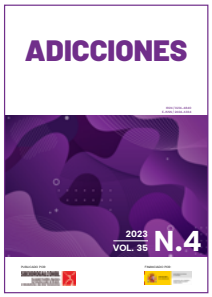

ORIGINAL

Effects of the lockdown due to the COVID-19 pandemic on alcohol consumption in patients under treatment in an alcohol relapse prevention programme

Efectos del confinamiento en el hogar debido a la pandemia por COVID-19 en el consumo en pacientes en tratamiento en un programa de deshabituación de alcohol

Francisco Arias*, Marta Marín*, Raquel Prieto*, José Ramón López-Trabada*, Alba Parra*, Pedro Sanz*, Yolanda Guerrero*, Patricia Delgado*, Lourdes González*, Nazaret Sáiz*, Sandra Suárez de Figueroa*, Antonio Villalba*, Gabriel Rubio*.

* Programa de alcohol. Hospital Doce de Octubre, Madrid, España.

Abstract

During the COVID-19 pandemic, several exceptional measures were put in place in order to avoid virus propagation, such as lockdown and the discontinuation of usual health care assistance services. It was considered that these changes might be associated with an increase in alcohol consumption and a higher risk of relapse for patients under treatment. The aim of this study was to assess changes in alcohol consumption during the lockdown period (between March and May, 2020) in patients following treatment under the Alcohol Use Disorders Programme at the "Hospital 12 de Octubre" in Madrid. A total of 311 patients were assessed through interviews carried out by telephone in accordance with usual clinical practice during that period. 76% of the total number of patients did not experience changes in their alcohol consumption, 9.2% stopped drinking and some experienced severe withdrawal syndrome, while 7.5% relapsed. The risk factors found for worsening the prognosis of the patients were: being female, drinking alcohol alone or at home, binge drinking, concomitant substance misuse and failure to attend therapy groups or self-help groups online during the lockdown. 31.6% of the sample described psychopathological symptoms due to the lockdown, especially those who already had psychiatric comorbidities. For this reason, we can conclude that during the lockdown as a result of the pandemic, most of our alcohol dependent patients did not modify their drinking patterns, but specific factors enabled us to identify a more vulnerable subgroup.

Key words: alcohol use disorder, lockdown, Covid-19, group therapy, lockdown psychopathology, psychiatric comorbidity

Resumen

Durante la pandemia producida por la infección por el Covid-19 se produjeron una serie de cambios sociosanitarios excepcionales para evitar su propagación como el confinamiento en el hogar y la supresión de los servicios asistenciales sanitarios habituales. Se consideró que estos cambios podrían implicar un incremento en el consumo de alcohol y un mayor riesgo de recaídas para los pacientes en tratamiento. El objetivo de este estudio fue valorar los cambios en el consumo durante el período de confinamiento (marzo a mayo de 2020) en los pacientes en tratamiento en el programa de alcohol del Hospital Doce de Octubre de Madrid. Fueron valorados 311 pacientes mediante entrevista telefónica dentro de la práctica clínica habitual durante ese período. Un 76 % de los pacientes no presentaron cambios en su situación de consumo, un 9,2% de estos cesaron en el consumo, algunos de ellos con cuadros de abstinencia graves, y un 7,5% recayeron. El sexo femenino, el consumo en solitario o en el hogar, en atracón, o el de otras drogas de forma concomitante y el no estar en terapia grupal o no asistir a grupos de las asociaciones de ayuda mutua por videoconferencia durante el confinamiento fueron factores predictores de mal pronóstico. Un 31,6% presentó alteraciones psicopatológicas debidas al confinamiento, sobre todo, aquellos pacientes con comorbilidad psiquiátrica. Por lo tanto, en situaciones similares a esta, la mayoría de los pacientes en tratamiento no modifican el patrón de consumo, pero, ciertas características identifican un subgrupo de sujetos más vulnerables.

Palabras clave: trastorno por uso de alcohol, confinamiento, Covid-19, terapia grupal, psicopatología por confinamiento, comorbilidad psiquiátrica

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■ **Send correspondence to:**
Francisco Arias Horcajadas. Programa de alcohol. Servicio de Psiquiatría, Hospital Doce de Octubre. Avda de Córdoba s/n, 28041, Madrid.
Email: farias1012@gmail.com

On March 14, 2020, the Spanish government declared a state of emergency (Real Decreto 463/2020) as a result of the Covid-19 pandemic, a pandemic declared by the WHO on March 11 (WHO, 2020a), placing the majority of the population in a lockdown situation. Such an exceptional and unknown situation led to concern about the repercussions these measures might have on mental health and drug use in the population. The media generated an avalanche of news on this topic which was often contradictory and not based on data, given the absence of such. Mobility restrictions impacted the illicit market, disrupted addicts' supply (Dietze & Peacock, 2020) and access to treatment (Alexander, Stoller, Haffajee & Saloner, 2020). Addicts in adverse social situations became extremely vulnerable to infection by Covid-19 and regarding care by social health resources (Volkow, 2020). People using illicit drugs may contract more cardiovascular and respiratory diseases, being more vulnerable to damage from Covid-19 infection (Laporte & Healy, 2020; PND, 2020). Furthermore, Covid-19 medications may be of lower efficacy and worse tolerance in addicts (Ghosh, Roub & Bisaga, 2020) and lead to pharmacological interactions (Anmella et al., 2020). Guidelines have been established for managing lockdown in addicts and their care services (EMCDDA, 2020; Instituto de Adicciones, 2020; Jiang et al., 2020; Ornell et al., 2020; Osalde, 2020; PND, 2020; Servicio Madrileño de Salud, 2020; United Nations Office on Drugs and Crime, UNODC, 2020; Vecchio et al., 2020). In the same spirit of concern regarding access to health services for addicted patients, several scientific societies have also published recommendations for the care of this population (Sociedad Española de Patología Dual, 2020; Socidrogalcohol, 2020).

With regard to smokers, a meta-analysis (Vardavas & Nikitara, 2020) of patients infected with Covid-19 showed that smoking worsened the prognosis of the disease. The WHO, the Spanish Ministry of Health and various researchers warned of this greater severity of Covid-19 among smokers (Correa & Redolar-Ripoll, 2020; Ministerio de Sanidad, 2020; WHO, 2020b) in response to media reports of a possible protective role of nicotine (Trujillo, 2020). Similarly, news emerged regarding the possible benefits of consuming other drugs or the usefulness of preparations based on them (Pascual, Isorna, Carvalho, Carvalho & Arias, 2020; Wang et al., 2020).

Regarding alcohol, sales in supermarkets were seen to rise and an increase in home consumption by habitual users in lockdown was posited (Hipólito, 2020). In mid-April, in full lockdown, the Spanish Ministry of Agriculture, Fisheries and Food published data showing an increase in beer consumption in the middle weeks of the month of 86.5%, a rise of 73.4% in wine and of 93.4% in spirits. It was reported that many people who were considered social drinkers drank the same amount or more than before, despite lockdown (Bazaga, 2020). There was a general sense that alcohol use increased, as stated by the Valencia College of Dietitians and Nutritionists (Bustelo, 2020) or some addiction treatment services (news report Europa Sur, 2020). However, this increase in the sale of beverages for home use could be due to the closure of bars, similar to the case of cigarette sales increasing in tobacconists because other points of sale were closed (news report, La Voz de Galicia, 2020).

Rehm et al. (2020) suggest two possibilities with regard to alcohol use during lockdown: an increase in consumption due to stress caused by the situation or a decrease given reduced availability. It was concluded that an initial decrease would then be replaced by a stress-related increase.

As a result of some statements by health professionals, the press has generally considered that lockdown leads to greater frustration, thereby increasing the risk of relapse in patients receiving treatment for alcohol dependence (E.P. 2020; Fuentes, 2020; news report, Infosalus, 2020), which may also be a result of therapies being broken off (news report, La Vanguardia, 2020). Lockdown has therefore been seen more as a risk factor for alcohol use than as an aid (news report, El Progreso, 2020; news report, La Vanguardia, 2020). Some specialists have suggested a potentially greater risk of increased use, but a lower likelihood of addiction onset (news report, Farmacosalud, 2020), or a greater risk in those patients whose habitual consumption was at home (Arana, 2020). Another concern that arose is the increase in alcohol withdrawal syndrome due to the usual healthcare services being less accessible and to changes in consumption patterns (Marsden et al., 2020).

Although the situation was exceptional, as mentioned, extrapolating from similar previous situations would predict an increase in psychopathological disorders. During the 2015 outbreak of the Middle East coronavirus respiratory syndrome (MERS-CoV), resulting in nearly 17,000 people in lockdown, an increased risk of post-traumatic stress symptoms was observed in health workers who had treated infected patients (Lee, Kang, Cho, Kim & Park, 2018), and symptoms of anxiety and depression were also noted among those under lockdown measures (Yoon, Kim, Ko & Lee, 2016), symptoms which in many cases persisted for months after lockdown (Jeong et al., 2016). It has been hypothesised that the negative psychopathological consequences of lockdown can favour drinking, which would in turn reduce the immune response and increase complications resulting from Covid-19 (Mota, 2020; Testino, 2020). Moreover, some authors have refuted the false belief that alcohol could kill the virus, which has caused problems in some countries (Chick, 2020) and have shown that, on the contrary, it could worsen the inflammatory response, in addition to the existing risk of contagion from sharing drinks (Mungmungpuntipantip & Wiwanitkit, 2020).

Likewise, the increase in sales of this substance has sparked a debate about limiting its sale (Marsden et al.,

2020). There has been criticism that certain businesses selling alcohol were nominated as essential resources, thus facilitating drinking at home (Reynolds & Wilkinson, 2020).

Our interest was focused on assessing the effects of lockdown on our patients and on those who were going to start the alcohol treatment programme, evaluating the extent to which consumption patterns and time or type of treatment were important in possible relapses and changes in consumption. The psychopathological impact of lockdown was also assessed. The resulting data can help guide preventive and therapeutic measures in the face of similar future situations.

Methodology

Patients

The study included all patients undergoing treatment in the alcohol programme of the Doce de Octubre hospital in Madrid. Additionally, patients were also assessed whose appointment to start the programme during the month of March 2020 was cancelled due to the discontinuation of ordinary outpatient care.

Patients are referred to the alcohol programme by primary care centres, other outpatient medical specialties, and also include those hospitalised for medical problems with alcohol dependence. After initial assessment by a professional, participants join the hospital's outpatient treatment programme for alcohol use disorder (AUD). This treatment is designed to last for at least two years and involves attendance at group therapy once a week in addition to close supervision by a psychiatrist and a nurse. Group treatment covers the majority, but there are other patients who, for personal reasons or because of issues with attending the group sessions, only have individual follow-up. A large number of patients are treated with alcohol aversives. The programme is structured in different phases: reception, cessation and preparation for discharge.

Phase 1: Reception and psychoeducation. The psychotherapeutic intervention in this phase is focused on increasing the motivation to change and offering psychoeducation on AUD. It takes place in the psychiatric day hospital or in mental health centres (MHCs). Visits usually take place every working day, the group, which is an open group, meets weekly and patients attend for around 2 months.

Phase 2: Relapse prevention and social skills. This phase is structured across 16 sessions in a weekly group format of relapse prevention followed by 12 sessions of social skills, in addition to individual follow-up and supervision by nurses.

Phase 3: Preparation for discharge. This group also meets weekly, and the focus in this phase is consolidating abstinence. The phase is of variable duration, depending on the progress of each patient but usually lasts until the two years of follow-up are completed, although it is extended for those patients who have had relapses or are at risk of these.

Treatment is carried out on an outpatient basis in the hospital or in the three (MHCs) dependent on the hospital where a psychiatrist and a nurse are in charge of the programme, and individual and group monitoring is also carried out.

Procedure

During the months of March, April and May 2020, when the state of emergency was decreed, our programme was mostly realised by telephone, with face-to-face attendance only in case of emergencies, and group therapy suspended. All patients undergoing treatment were called regularly and consumption status and psychopathological repercussions of lockdown were assessed. Relatives living at the patient's home were also consulted to corroborate the clinical situation. Previous clinical information was gathered from the patient's medical history. Validated psychopathology scales were not used and the presence of psychopathological disorders was instead considered when the patient required a specific psychopharmacological or psychotherapeutic intervention for this reason. In case of doubt regarding possible consumption, face-to-face contact was attempted. At the end of May and during the month of June, face-to-face consultations were restarted and information previously collected was corroborated.

Possible psychiatric comorbidity linked to the presence of some mental disorder prior to lockdown was assessed through the clinical interview. Alcohol consumption patterns were labelled 'continuous' for drinking daily, 'binge drinking' for more than five drinks in a short period of time but not daily drinking, and 'irregular' for neither of the above patterns. Participants who only drank with other people were classified as 'social' drinkers, 'solitary' drinkers used alcohol predominantly alone and in 'mixed' drinkers both types of consumption were the case. The preferred place of consumption was assessed and classified in a dichotomous variable, labelled 'at-home' for home drinking and 'outside' when alcohol was not drunk at home. The telephone interviews explored whether patients attended group meetings by videoconference organized by self-help groups. The type of lockdown was also explored, whether or not they were able to leave home for work reasons, as well the work they were doing and how often and why people living at home with the patient went out.

Statistical analysis

Descriptive analyses of quantitative and qualitative variables were performed. The Kolmogorov-Smirnov test was used to analyze whether the quantitative variables had a normal distribution. Since none conformed to the normal distribution, the Mann-Whitney U test was performed for the comparison of 2 independent samples and the Kruskal-

Wallis test for 3 samples. For categorical variables, the Chi-square test (or Fischer's exact test, if applicable) was used. ORs and 95% confidence intervals were calculated.

Multiple regression analysis was performed to explore which parameters can predict changes in alcohol use and the presence of psychopathology, with binary logistic regression models for binary dependent variables and a multinomial logistic regression for the three-category variable of changes in consumption. The models initially included those variables with p below 0.1 and those that could be relevant, such as age or sex, following a backward stepwise strategy and the maximum likelihood estimation method. All analyses were performed with the statistical programme SPSS, v.23.

Results

Table 1 describes the characteristics of the sample. Twenty-six patients registered for the programme ("new" patients) had not yet started it, and 153 patients were in treatment in the hospital and 132 in the MHCs. Weekly groups were attended by 48.3%. Subjects who were abstinent prior to lockdown comprised 77.7% of the sample, with 88.2% not leaving their homes and 9.9% able to leave for work reasons.

Changes in drinking during lockdown

Of the total sample, 232 patients (76.1%) did not change the amount of alcohol they consumed, 23 patients (7.5%) started to drink during lockdown and 9 (3%) subjects increased the frequency or amount of drinking, while 28 patients (9.2%) stopped drinking and 10 (3.3%) reduced drinking frequency or amount. Three patients did not change the frequency of drinking but increased the use of anxiolytics (Table 1).

The rise in drinking during lockdown was associated with being female, binge drinking, cannabis use and not being in group treatment or attending videoconference groups during lockdown, as well as with greater psychopathology during lockdown. Solitary use, cannabis use and not being in group therapy were also associated to a lesser degree with changes in drinking (Tables 2 and 3).

During lockdown, 242 patients were abstinent and 63 had active consumption. Active alcohol consumption was associated with female sex, preferential consumption at home, cannabis use, not attending telematic groups during lockdown, as well as higher current psychiatric comorbidity (Table 4).

There were 237 patients (77.7%) abstinent prior to the state of lockdown. When comparing the 23 patients who relapsed versus the 214 who remained abstinent, the results are similar to the previous ones. Relapse to drinking was associated with being female, the possibility of leaving home for work reasons, cannabis use, not being in group therapy, as well as a greater presence of psychopathology during lockdown (data not shown).

Of the 68 patients with active consumption prior to lockdown, 28 stopped drinking and 40 continued. Those who maintained their drinking were mostly at-home drinkers (n = 32, 91.4%, chi = 7.4, p = 0.007, OR = 6.4, CI = 1.5-27.1) and were not being treated with disulfiram (n = 37, 94.9 %, OR = 8.2, CI = 1.6-42.7).

In the analysis of the "new" patients, registered to start the programme but not yet included, there were 26 subjects, of which 19 were men. Of these, five (20%) showed a rise in consumption, in some cases quite considerable (one increased from 3 to 40 SDUs). Conversely, five other patients (20%) stopped drinking, with two having severe withdrawal syndrome. In addition, three patients (12%) reported drinking less, with some being solitary at-home drinkers and consumption falling due to greater supervision on the part of the spouse who was also confined to the home. Finally, 12 (48%) subjects did not report changes in consumption. Of these, 7 of 25 (28%) reported presenting psychopathological alterations due to lockdown, referring mainly to anxiety symptoms.

Covid-19 infections, hospital admissions and deaths

Test-confirmed Covid-19 infections were presented by 1.6% of the sample, and 3.6% reported Covid-19 compatible symptoms without taking a confirmatory test and were followed up by their primary care physician at home. Two patients were hospitalized for the disease. There were four deaths in the total sample during the months of assessment, one from Covid-19 infection and simultaneous decompensation of their liver disease, another two from liver disease without Covid-19 infection, and one patient with liver disease died of unknown causes (Table 1).

Psychopathological disorders related to Covid-19 infection were explored. Five patients reported no problems, three had anxiety, three depressive symptoms and one insomnia. Of these patients, three mourned the death of a relative, usually one of the parents.

Psychopathological disorders related to lockdown

Telephone interviews were used to assess the presence and type of psychopathological disorders reported by patients. Of these, 208 (68.4%) did not report serious psychopathological issues. Conversely, 96 (31.6%) reported various disorders, grouped according to the predominant symptom as: anxiety in 71 cases (23.4%), 12 cases of depression (3.9%), 8 of insomnia (2.6%) and 5 had a fear of falling ill (1.6%). Ten patients reported being in mourning for relatives who died from Covid-19.

Breaking down the symptoms reported by the 96 patients, the most frequent were anxiety symptoms (76

Table 1
Sample characteristics

		N = 311 (%)
Sex	Male	224 (72)
Age	Mean age (SD) [Range]	53.0 (9.8) [19-88 years]
	Median (IQR)	54 (11)
Marital status	Single	81 (26.7)
	Married	129 (42.6)
	Separated	85 (28.1)
	Widowed	8 (2.6)
Living arrangements	With own family	146 (48.2)
	With family of origin	75 (24.8)
	Alone	57 (18.8)
	Other	25 (8.2)
Education	None	6 (2)
	Primary	174 (58.6)
	Secondary	79 (26.6)
	University	38 (12.8)
Work situation prior to lockdown	Unemployed	77 (25.2)
	Occupational disability	81 (26.6)
	Active employment	77 (25.2)
	Retired	58 (29)
	Other	12 (3.9)
Work situation during lockdown	No change	267 (87.5)
	STW	9 (3.0)
	Teleworking	11 (3.6)
	Unemployed	16 (5.2)
	Other	2 (0.7)
Concomitant medical pathology	None	109 (37.6)
	Liver disease	99 (34.1)
	Pancreatitis	7 (2.4)
	Heart disease	14 (4.8)
	Respiratory pathology	4 (1.4)
	Neurological pathology	7 (3.4)
	Other	26 (9.0)
	Pluripathology	24 (8.3)
Current psychiatric comorbidity	None	118 (40.1)
	Mood disorders	54 (18.4)
	Anxiety disorders	19 (6.5)
	Psychosis	7 (2.4)
	Cognitive impairment	11 (3.7)
	Personality disorders	34 (11.6)
	ADHD	6 (2.0)
	Gambling	6 (2.0)
	Others	3 (1.0)
	Various	36 (12.2)
Current use of other drugs	Yes	182 (61.5)
	Tobacco	173 (58.6)
	Cannabis	19 (6.4)
	Cocaine	25 (8.4)
	Opioids	3 (1.0)
	Sedatives	8 (2.7)
	Others	2 (0.7)
Consumption pattern	Continuous	234 (79.1)
	Binge drinking	24 (8.1)
	Irregular	38 (12.8)
	Social	36 (12.8)
	Solitary	94 (33.5)
	Mixed	151 (53.7)
Preferred places of consumption	Bar	53 (19)
	At-home	77 (27.6)
	Outside	6 (2.2)
	Bar and home	99 (35.5)
	Bar and outside	17 (6.1)
	Home and outside	11 (3.9)
	Bar, home and outside	12 (4.3)
	Other	4 (1.4)
Number of SDUs pre-lockdown	Mean (SD) [Range]	1.95 (6.0) [0-50]
	Median (IQR)	0 (0)
Previous abstinence	Abstinent	237 (77.7)
	Drinking	68 (22.3)
Number of SDUs during lockdown	Mean (SD) [Range]	1.5 (5.3) [0-40]
	Median (IQR)	0 (0)
Abstinence post-lockdown	Abstinent	242 (79.3%)
	Drinking	63 (20.7%)
Usual number of SDUs before treatment	Mean (SD) [Range]	20.9 (14.7) [4-120]
	Median (IQR)	15 (20)
Current disulfiram treatment		138 (45.8)
In group therapy prior to lockdown		150 (48.3)
In video conference groups during lockdown		40 (13.3)
Time in treatment (months)	Mean (SD) [Range]	26.7 (24.6) [0-100]
	Median (IQR)	20 (35)
Covid-19 infection, hospital admissions and deaths	None	288 (94.7)
	Confirmed	5 (1.6)
	With symptons but no confirmatory test	11 (3.6)
		2 (0.7%)
	Admitted with Covid	5 (1.6%)
	Admitted for other reasons	4 (1.3%)
	Deaths during lockdown	
Isolation measures during lockdown	Not leaving home	268 (88.2)
	At home but able to leave for work reasons	30 (9.9)
	Other (hospitalization, quarantine at home)	6 (2.0)
Lockdown psychopathology	None	208 (68.4)
	Anxiety	71 (23.4)
	Depression	12 (3.9)
	Insomnia	8 (2.6)
	Fear of getting sick	5 (1.6)
Changes in consumption during lockdown*	No change	232 (76.1)
	Stopped drinking	28 (9.2)
	Started drinking	23 (7.5)
	Reduced drinking	10 (3.3)
	Increased drinking	9 (3.0)
	Substitute use of sedatives	3 (1.0)

Note. ADHD: Attention deficit hyperactivity disorder. IQR: Interquartile range. SD: standard deviation. SDU Standard Drink Unit. STW: short-time work.
*Six patients not included (4 due to death and 2 hospitalized during this period).

Table 2
Comparative study of changes in consumption during lockdown

		No change N = 232 (%)	**Increased drinking N = 32 (%)**	**Reduced drinking N = 38 (%)**	**X^2 or test used**	**p**
Age (in years)	Mean (SD) Median (IQR)	53.5 (9.2) 55 (11)	47.6 (11.7) 49 (12)	54.1 (10.9) 53 (14)	Kruskal-Wallis	0.06
Sex	Female	63 (27.2)	13 (40.6)	10 (26.3)	2.6	0.27
Education	None Primary Secondary University	4 (1.8) 137 (60.9) 60 (26.7) 24 (10.7)	0 (0) 13 (40.6) 10 (31.3) 9 (28.1)	2 (5.7) 21 (60.0) 7 (20.0) 5 (14.3)	12.4	0.05
Employment	Unemployed OD Working Retired Other	56 (24.3) 72 (31.3) 50 (21.8) 42 (18.3) 10 (4.3)	8 (25.0) 4 (12.5) 13 (40.7) 5 (15.6) 2 (6.3)	12 (31.6) 5 (13.2) 10 (26.3) 11 (28.9) 0 (0)	20.7	0.05
Consumption pattern	Continuous Binge Irregular	184 (82.1) 15 (6.7) 25 (11.2)	19 (59.4) 8 (18.8) 7 (21.9)	30 (81.1) 3 (8.1) 4 (10.8)	9.5	0.05
Consumption pattern	Social Solitary Mixed	30 (14.1) 60 (28.2) 123 (57.7)	2 (6.9) 14 (48.3) 13 (44.8)	4 (11.1) 18 (50.0) 14 (38.9)	10.3	0.035
On disulfiram treatment		115 (50.0)	14 (43.8)	8 (22.2)	9.7	0.008
In group therapy prior to lockdown		133 (65.5)	6 (25.0)	6 (20.0)	32.6	0.000
In video-conference groups during lockdown		35 (15.3)	2 (16.3)	2 (5.6)	4.07	0.1
Presence of psychopathology during lockdown		60 (25.9)	18 (56.3)	15 (40.5)	14.0	0.001
Current cannabis use		9 (4.0)	6 (20.0)	4 (11.4)	12.8	0.002
Current cocaine use		14 (6.1)	6 (20.0)	4 (11.4)	7.3	0.026

Note. IQR: interquartile range. OD: occupational disability. SD: standard deviation.

Table 3
Multinomial regression according to change in consumption during lockdown

						95% CI for OR	
Reference category: unchanged consumption		**Wald**	**df**	**p**	**OR**	**Lower limit**	**Upper limit**
Drinking more	Interceptation	0.004	1	0.95			
	Age	1.97	1	0.16	0.95	0.89	1.02
	Sex (male)	4.59	1	0.03	4.12	1.13	15.06
	In association groups (no)	5.72	1	0.02	0.07	0.01	0.62
	Psychopathological disorders due to lockdown (no)	5.42	1	0.02	4.13	1.25	13.61
	Cannabis (no)	7.09	1	0.01	17.04	2.11	137.33
	In group therapy (yes)	5.36	1	0.02	4.19	1.25	14.07
	Consumption pattern (binge)	6.32	1	0.01	0.15	0.03	0.66
	Consumption pattern (irregular)	0.78	1	0.37	0.40	0.05	3.02
	Consumption pattern (solitary)	1.08	1	0.30	0.31	0.03	2.82
	Consumption pattern (mixed)	0.51	1	0.47	1.59	0.45	5.62
	Secondary education	6.32	1	0.01	0.12	0.02	0.63
	University	4.45	1	0.03	0.16	0.03	0.88
Drinking less	Interceptation	0.000	1	0.99			
	Age	2.15	1	0.14	1.05	0.98	1.11
	Sex (Male)	1.26	1	0.26	0.44	0.11	1.83
	In association groups (no)	0.003	1	0.96	3.29E-6	4.08E-219	2.651E+207
	Psychopathological disorders due to lockdown (no)	3.83	1	0.05	3.14	1.00	9.90
	Cannabis (no)	15.46	1	0.00	88.01	9.44	820.30
	In group therapy (yes)	9.94	1	0.00	6.87	2.07	22.74
	Consumption pattern (binge)	0.01	1	0.93	0.92	0.14	6.08
	Consumption pattern (irregular)	0.98	1	0.32	0.23	0.01	4.15
	Consumption pattern (solitary)	2.65	1	0.10	3.51	0.77	15.94
	Consumption pattern (mixed)	4.06	1	0.04	4.48	1.04	19.25
	Primary education	0.01	1	0.90	0.84	0.04	15.52
	Secondary education	0.26	1	0.61	0.58	0.07	4.58
	University	0.44	1	0.51	0.48	0.06	4.12

Note. CI: confidence interval. df: degrees of freedom. OR: odds ratio;
Log likelihood = 190.12. Chi = 97.3. Gl = 22. P = 0.000. Cox and Snell pseudo R2 = 0.34.

Table 4
Regression model predicting consumption during lockdown

					95% CI for OR	
Variables (reference category)	**Wald**	**df**	**p**	**OR**	Lower	Upper
Sex (male)	3.26	1	0.07	2.17	0.93	5.05
Cannabis (no)	4.26	1	0.04	4.37	1.08	17.74
Mental disorder (no)	2.76	1	0.10	2.35	0.86	6.42
Groups (yes)	10.63	1	0.001	4.27	1.78	10.23
Place of consumption (outside)	4.41	1	0.04	3.02	1.08	8.47
Association groups (yes)	2.75	1	0.09	5.85	0.72	47.19
Constant	23.38	1	0.00	0.003		

Note. CI: confidence interval. df: degrees of freedom. OR: Odds ratio;
Percentage of correct corrections: 83.9%. Log likelihood = 158.6. Cox and Snell R2 = 0.17. Chi squared of the model = 44.3. gl = 6. P = 0.000.

Table 5
Presence of psychopathological disorders related to lockdown

		No psycho-pathology N = 208 (%)	Presence of psychopathology N = 96 (%)	X^2 or test used	p	*OR (95% CI)*
Age	Medians (IQR)	55 (11)	52 (11)	U Mann-Whitney	0.006	
	Female	48 (23.1)	38 (39.6)	8.8	0.003	2.2 (1.3-3.7)
Consumption pattern	Social Solitary Mixed	29 (15.3) 48 (25.3) 113 (59.5)	7 (7.8) 46 (51.1) 37 (41.1)	18.7	0.000	
Group therapy attendance		109 (61.9)	37 (44.6)	6.9	0.009	2.02 (1.2-3.4)
Psychiatric comorbidity	No Mood D Anxiety D Psychosis Cog Imp PD ADHD Gambling Other Various	102 (51.0) 34 (17.0) 4 (2.0) 6 (3.0) 10 (5.0) 23 (11.5) 5 (2.5) 3 (1.5) 2 (1.0) 11 (5.5)	14 (15.4) 20 (22.0) 15 (16.5) 1 (1.1) 1 (1.1) 10 (11.0) 1 (1.1) 3 (3.3) 1 (1.1) 25 (27.5)	70.3	0.000	
Presence of psychiatric comorbidity		98 (49.0)	77 (84.6)	33.1	0.000	5.7 (3.0-10.8)

Note. ADHD: Attention deficit hyperactivity disorder. CI: confidence interval. Cog Imp: cognitive impairment. D: disorder. IQR: interquartile range. OR: odds ratio. PD: personality disorder.

Table 6
Regression model predicting presence of psychopathology during lockdown

Variables	Wald	df	p	OR	95% CI for OR	
					Lower	Superior
Sex (male)	3.84	1	0.05	1.79	1.00	3.22
Mental disorder (no)	22.88	1	0.000	4.92	2.56	9.45
Change in consumption (1)	6.38	1	0.01	2.99	1.28	6.99
Change in consumption (2)	1.50	1	0.22	1.66	0.74	3.73
Constant	54.77	1	0.000	0.10		

Note. CI: confidence interval. df: degrees of freedom. OR: Odds ratio; Change in consumption (1): increased vs no change. Change in consumption (2): decreased vs no change.
Percentage of correct classifications: 71.2%. Log likelihood = 308.5. Cox and Snell R2 = 0.15. Chi squared of the model = 46.0.

cases), sometimes linked to conflict in living together or exacerbation of previous anxiety symptoms; depressive symptoms (including depressed mood, apathy or relapse into a depressive picture, in 25 cases), insomnia (29 subjects), fear of becoming infected (8), craving for alcohol (5), sudden mood swings (5), obsessive rumination (4), eating disorders (4), physical discomfort (4), hypochondriacal concerns (3), fear of going out (3), thoughts of death (2), lack of concentration (2), aggressiveness (2), visual illusions (1), ideas of harm (1) or clinical worsening after abandoning psychotropic drugs due to not going to the pharmacy (1).

The presence of psychopathological disorders due to lockdown was associated with being female, increased alcohol consumption and, mainly, with the presence of current psychiatric comorbidity (Tables 5 and 6).

Discussion

Our data would not lead us to conclude that lockdown is a risk factor for relapse in patients under treatment. Alcohol consumption remained stable among most of the patients and abstinence could be maintained. However, about a

quarter of participants presented changes in their drinking, either increasing or decreasing it, or taking advantage of the situation to quit drinking. Relapse was reported by 7.5% of patients during the three months of lockdown assessed. In general, it can be considered that there were few relapses in patients on stable treatment, but the number was possibly higher than usual, given that the percentage of relapses in our programme over the entire previous year was over 20% (unpublished data). As outlined above, the idea that addiction specialists transmitted through the media was that an increase in consumption was to be expected due to the stress of lockdown, with some going so far as to claim that the increase was very strong (news report, Redacción Médica, 2020). While it is possible that this is not the case for patients already in treatment, such an increase is possible in social drinkers or drinkers not considered to be problematic or addicted without treatment, or those drinking as a substitute for other addictions. Either way, lockdown has also been seen as reinforcing abstinence according to Alcoholics Anonymous (news report, El Progreso, 2020). In line with our data, a study of newly abstinent smokers in a smoking cessation programme in Lleida found that relapses did not significantly increase in lockdown, although it considered that smoking could increase in the non-abstinent (Ricou, 2020). A Chinese study with an online survey showed that during the Covid-19 pandemic in their country, 32% of alcohol users drank more and 19% of alcohol addicts relapsed (Sun et al., 2020). These figures are higher than ours, possibly pointing to differences between addicts in treatment and those in the general population.

Exposure to highly stressful situations such as terrorist attacks, natural disasters or accidents has been associated with an increase in the percentage of problems with alcohol use in some studies (Boscarino, Adams & Galea, 2006; Lebeaut, Tran & Vujanovic, 2020) but not in others (North, Kawasaki, Spitznagel & Hong, 2004; Shimizu et al., 2000). It is therefore essential to analyze which factors can determine the differences found in these studies. Exposure to SARS in China in 2003 led to a rise in alcohol-related problems and was associated with working as a health worker during the epidemic (Wu et al., 2008). A higher degree of exposure to the virus and needing to be isolated as a consequence of it were identified as risk factors. In addition, a dose-response relationship was identified between the intensity of exposure to the virus and symptoms of long-term alcohol addiction (Wu et al., 2008). However, in relation to the Covid-19 pandemic, the scarcity of data on the possible increase in consumption as a result of lockdown has been recognized (García-Álvarez, de la Fuente-Tomás, Sáiz, García-Portilla & Bobes, 2020).

Our research is thus pioneering in this regard, indicating that there are few relapses in patients under stable treatment and providing information on the most vulnerable subjects involved. Thus, drinking patterns, sex, the use of other drugs, psychiatric comorbidity and the type of treatment received are of relevance. Therefore, in similar situations of lockdown at home, special attention must be paid to those dependents on alcohol who are women, those with solitary and mainly at-home drinking or with non-daily drinking patterns or with concomitant use of other substances such as cannabis or cocaine, and also those with psychiatric comorbidity, mainly mood and anxiety disorders. In addition, patients in group treatment and those taking part in videoconference group therapy organised by self-help associations are less at risk of drinking in this situation, thus underlining the importance of establishing measures of this type, although it may also be a result of the selection of patients with a better prognosis due to greater motivation and involvement in treatment.

Curiously, some of these risk factors for increasing consumption also seem related to reduced drinking; thus, using cannabis and not being in group therapy were associated with a decrease, with no clear explanation for this situation. In any case, the patients who stopped drinking were those with who drank more outside the home. While the use of cannabis and cocaine was associated with both an increase and a decrease in drinking during the period analyzed, it was more linked to an increase and there were few subjects with concomitant alcohol use, as reflected in such wide OR confidence intervals.

Subjects who quit drinking also constitute a vulnerable population, given the risk of complications during withdrawal, aggravated by the difficulty of access to health services and fears regarding this issue. Thus, for example, two of our patients who were going to start treatment had severe withdrawal syndrome on abruptly quitting. Therefore, it is necessary to inform patients of this risk and have care resources available for these types of complications. The increase in severe withdrawal syndrome in this situation has been previously described (Narasimha et al., 2020).

The sample size does not allow us to conclude whether the number of Covid-19 infected and deaths is different from expected, but it seems that from a somatic point of view (liver disease), seriously ill patients may constitute a vulnerable population in these circumstances due to greater difficulties in accessing health services. In our case, the four deaths during this period were subjects with severe liver disease, although the high percentage of patients with this condition in our programme must be taken into account. In our sample, 5.2% had a Covid-19 infection or suggestive symptoms. Data from Madrid's health department on May 31, 2020, showed 308,110 patients under follow-up in the Community of Madrid for primary care due to possible Covid-19 and there were 9,064 deaths in hospitals for this reason (Dirección General de Salud Pública, 2020). Considering the total population of the Community of

Madrid, this would work out at a similar percentage to ours. However, our sample included a high percentage of subjects who did not have to leave for work reasons and, therefore, had low exposure.

Regarding the psychopathological disorders associated with lockdown in this population, it is necessary to highlight the close link between them and the presence of previous psychiatric comorbidity, rather than with other factors associated with alcohol use. Thus, the presence of psychiatric comorbidity points to another population group requiring more professional supervision due to greater vulnerability to complications in this situation. In any case, the increase in psychopathology was also associated with an increase in drinking, although we cannot establish whether one is the cause or the consequence of the other. They were also more frequent among women who, furthermore, had greater psychiatric comorbidity, greater solitary and at-home drinking, and a greater increase in consumption. Therefore, women are another population group with greater vulnerability in this situation.

The most frequent manifestations in our patients were anxiety symptoms. However, in a study carried out with a large sample of the general Spanish population, it was noted that during the first weeks of lockdown the most frequent emotional responses were depressive symptoms (46.7%) and, contrary to expectations, anxiety symptoms were the least frequent, affecting 6.1% of the population (García-Álvarez et al., 2020). We do not know if the responses of addicted individuals may be different from the rest of the non-addicted population, but it does not seem to be an adequate explanation of the discrepancy in the data. In addition, it has been pointed out that the psychological effects of lockdown appear to increase with the passing of time (García-Álvarez et al., 2020) and in certain vulnerable groups of the population, such as health personnel (Bai et al., 2004; Maunder et al., 2003), people with somatic diseases or people with a mental disorder, more specifically depression, anxiety or bipolar disorder (García-Álvarez et al., 2020). Similarly, substance use is also considered a factor of vulnerability (Pfefferbaum & North, 2020). It has been hypothesised that stress, depression, irritability, insomnia, fear, confusion, anger, frustration, boredom or stigma, would be among the most frequent responses to lockdown, and in addition, there is a concern that these symptoms may persist for a long time after the period of confinement (Brooks et al., 2020). It has also been pointed out that such measures could notably increase the risk of suicide in the population (García-Álvarez et al., 2020; Reger, Stanley & Joiner, 2020). Given the risk these manifestations entail, the importance of highlighting the need to increase resilience in order to face the stress caused by the epidemic has been pointed out and recommendations have been offered in this regard (Vinkers et al., 2020).

In sum, conclusions about levels of drinking in addicts or habitual drinkers without treatment cannot be drawn from the present data. It has been suggested that people subjected to stressful situations such as lockdown resort more frequently to substance use to alleviate negative emotions (García-Álvarez et al., 2020); however, we have no data in this regard. There is also no information on what may have occurred to alcohol consumption in the youngest population.

Care services for addicts must therefore take into account the most vulnerable subjects who may require more health care, such as patients with serious medical problems, severe addicts who want to stop using and worry about the risk of complicated withdrawal, addicts with fewer therapeutic resources to deal with risk situations who do not attend group therapy nor self-help groups, addicted women and alcohol-dependent women with psychiatric comorbidity who risk exacerbating their psychopathology.

Among the limitations of the study, it should be noted that the detection of drinking and relapses may be underestimated given that patients frequently conceal their drinking; nevertheless, relatives were also interviewed and when there were suspicious signs regarding consumption, the patient was asked to attend in person for a breathalyzer test and was personally reassessed during the months of May and June 2020. Furthermore, psychopathological assessment was by telephone interview without the use of standardized instruments, but with the purpose of assessing what the patient reported spontaneously. In addition, classifying patterns or places of consumption is complicated since there are no pure patterns, but rather the predominance of one type of consumption over another. Finally, it would be interesting to assess relapse risk during the process of restriction easing, something we observed while following up our patients but which was not analyzed. It is possible that the risk of relapse for patients in treatment may be greater in this period than during the lockdown period itself.

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Conflict of interests

The authors declare no conflicts of interest in relation to this study.

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