

ORIGINAL

Advantages of telephone assistance on adherence to treatment in patients with alcohol and other addictions during the Covid19 pandemic

Beneficios de la atención telefónica durante la pandemia covid19 en la adherencia terapéutica en pacientes con alcoholismo y otras adicciones

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Abstract

The Covid19 pandemic has led to many publications about its influence on the treatment and evolution of individuals with a substance use disorder, leading to contradictory results. In this study, the adherence and abstinence rates of patients who started treatment in an Addictive Behavior Unit during the pandemic are analyzed, compared with others who attended the previous year and comparing those who were attended in person or by phone. The results indicate that during the Covid19 period, patients had greater adherence to treatment after one month of follow up and when attended to by phone. At 3 and 12 months, greater adherence was maintained, although it was not statistically significant. Regarding abstinence, the small sample size made it difficult to obtain significant differences. The conclusion is that, despite a quantitative decrease in the number of patients beginning drug treatment, in qualitative terms the pandemic led to greater adherence in the short and medium term. Telephone attention can play an important and positive role at this point, complementary to other resources and interventions.

Keywords: substance addiction, substance abuse treatment centers, covid19 pandemic, telephone interview, treatment adherence and compliance, telemedicine

Resumen

La pandemia por covid19 ha generado muchas publicaciones acerca de su influencia en el tratamiento y evolución de personas con un trastorno por uso de sustancias, con resultados contradictorios, a veces basadas en datos y otras en inferencias indirectas de otros datos. En este trabajo se estudia la adherencia y tasas de abstinencia de pacientes que inician tratamiento en una Unidad de Conductas Adictivas durante la pandemia, respecto a otros que acudieron el año previo y comparando los que hicieron visita presencial o telefónica. Los resultados indicaron mejor adherencia al mes de seguimiento en los pacientes del periodo covid19 y en los que fueron atendidos telefónicamente. A los 3 y 12 meses se mantuvo una mejor adherencia, aunque no significativa estadísticamente. Respecto a la abstinencia, el pequeño tamaño de la muestra dificultó obtener diferencias significativas. Se concluye que la pandemia, aunque ha significado una disminución del número de inicios de tratamientos por consumo de sustancias, también ha repercutido en una mayor adherencia a corto y medio plazo. La atención telefónica puede jugar un papel importante y positivo en este aspecto, complementario a otros recursos e intervenciones.

Palabras clave: adicción a sustancias, centros de tratamiento de abuso de sustancias, pandemia covid19, entrevista telefónica, adherencia y cumplimiento del tratamiento, telemedicina

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The global scale of the COVID-19 pandemic and its impact on health services in particular is evident. At the psychological level, there is speculation about the role of stress (Clay & Parker, 2020) and the availability of coping behaviours (Fullana, Hidalgo-Mazzei, Vieta & Radua, 2020) among the general population in the way they adapt to a lockdown situation.

These behaviours may include changes in the use of alcohol and drugs. Indeed, there is evidence of such changes, although not always involving greater substance use. Online surveys in the general population have found increases in Internet addiction and drinking (Sun et al., 2020), and in anxiety, depression and risky alcohol use, especially among young people (Ahmed et al., 2020). Various studies have found a heterogeneous trend in alcohol use, with some people increasing their consumption while others have reduced it (Chodkiewicz, Talarowska, Miniszewska, Nawrocka & Bilinski, 2020; Garnett et al., 2021). However, studies with larger samples covering different European countries (Kilian et al., 2021) or in Australia (Callinan et al., 2021) indicate a trend towards decreasing alcohol use in the general population.

Regarding patients undergoing treatment for a substance use disorder (SUD), it has been pointed out that this population is particularly vulnerable to the psychological effects of the COVID-19 pandemic (Dubey et al., 2020; Dunlop et al., 2020), and recommendations on the need to adapt and improve the interventions carried out in this population have been made. For example, the importance of supporting telemedicine, home hospitalization, liaison psychiatry, or harm reduction has been noted (López-Pelayo et al., 2020), as has the need to adapt opioid agonist dispensing treatments during a pandemic (Kar et al., 2020).

However, studies on whether this vulnerability is reflected in an increase in substance use among patients are scarce and contradictory: in some studies, some patients used more and others less, as is the case in the general population (Kim et al., 2020). Increased drinking may be indirectly inferred in other studies through findings involving a higher percentage of positive toxicological controls (Barrio et al., 2021). Yet other studies have observed stability in alcohol use, despite the increase in symptoms of anxiety and depression in a significant number of patients (Blithikioti, Nuño, Paniello, Gual & Miquel, 2021). Some of these studies suffer from the lack of a control group or the sample bias resulting from voluntary online surveys.

In general, there is no shortage of articles reflecting on possible psychosocial risk factors, with predictions and advice arising from the pandemic, or carried out with online surveys. Nevertheless, direct objective data on the real impact of the COVID-19 pandemic on patients under treatment for SUD are scarce.

Furthermore, as has been the case with health services in general or mental health services in particular, addiction treatment services have had to adapt to the COVID-19 pandemic, leading to the appearance of innovations that can improve access to treatment (Samuels et al., 2020), such as online support in the follow-up of patients with SUD (Bergman & Kelly, 2021).

Different studies have shown that the use of the telephone can be effective in treating patients with depression (Castro et al., 2020) or SUD (Jackson, Booth, Salmon & McGuire, 2009; McKay, Lynch, Shepard & Pettinati, 2005), and it also appears that telephone follow-up may decrease the readmission rate and severity of addiction, although it does not significantly decrease alcohol use (Horng & Chueh, 2004).

Taking into account the scarcity of empirically based literature and the contradictory results obtained to date on whether or not the use of alcohol and other substances rose, fell or remained the same in patients treated for SUD, we set ourselves two research aims:

- i. The role that the COVID-19 pandemic may play at the beginning of treatment for patients with SUD, in their adherence (attendance at scheduled visits) and abstinence, which are central elements in improving their mental and social state (Killaspy, Banerjee, King & Lloyd, 2000). To this end, the number of patients with SUD requesting treatment at an Addictive Behaviour Unit (ABU) during the COVID-19 pandemic period and their sociodemographic and clinical characteristics was compared to those in a pre-pandemic period of the same duration. Their adherence to treatment and abstinence rates at one month, three and twelve months were also compared.
- ii. The efficacy of telephone counselling was studied by comparing the differences in adherence and abstinence, at one month and at three months, between patients with SUDs attending in person in the traditional face-to-face manner and those who were attended to in a non-face-to-face manner by telephone.

Material and method

During the COVID-19 lockdown, patients were attended to by telephone or in person, depending on the phase and intensity of lockdown. In the subsequent follow-up, telephone and face-to-face visits were alternated and combined depending on the clinical situation and needs of the patient. The initial visit to our ABU, part of a general hospital's outpatient department, and to those restarting treatment after abandoning it more than one year earlier is referred to as patient reception. Receptions were carried out by a psychologist from the team, making an initial diagnostic assessment, collecting the relevant socio-

demographic and clinical information for the treatment, agreeing on and explaining the initial therapeutic strategy to the patient and programming follow-up treatment at the ABU. This initially consisted of a visit by a psychiatrist after two weeks, with a prescription of the appropriate pharmacological treatment, the performance of a general analysis and weekly toxicological and nursing controls, and a subsequent follow-up at one, three, six and twelve months by a psychologist and/or psychiatrist. All patients so programmed were diagnosed with SUD. Cases without this diagnosis were referred to other specialized services to attend to their problems.

Two sub-studies were carried out with different but related samples:

In Study 1, all patients consecutively attending a reception visit in the period between March 15 and May 31, 2019 were compiled retrospectively. The same procedure was used for patients received in the same period of 2020.

Patients diagnosed with SUD and recommended for subsequent treatment in the ABU itself were included. Those referred to other units or services (on the basis of healthcare area, levels of demand or type of pathology) were excluded. During reception, sociodemographic and clinical data were collected. Follow-up was carried out at one, three and twelve months, with an assessment of compliance with follow-up visits and abstinence from the main drug at three months and using the available data from the latest possible follow-up. The characteristics of the patients at reception and in their follow-up between both periods (2019 and 2020) were compared. These data were collected by the professionals who carried out the reception and follow-up visits and were recorded in a computerized medical record.

In Study 2, all patients who had a first visit scheduled on Tuesdays and Thursdays in the period after the start of the COVID-19 pandemic, between March 24 and September 7, 2020, in the same ABU, were compiled retrospectively by the same professional so as to minimize sample variability. Data from receptions repeated in the same period (or with a face-to-face reception of patients that had previously been attended to by telephone or vice versa) were excluded. Sociodemographic data and those regarding compliance with follow-up visits and abstinence from the main drug up to 3 months were gathered. A data comparison was made between patients with face-to-face and telephone reception.

The sociodemographic data of reception and follow-up visits of both studies was compiled retrospectively from the medical records in an anonymous manner. All patients met criteria (abuse and dependence) for substance use disorder (SUD) according to ICD-10. Abstinence from the main drug was measured through clinical observations, weekly toxicological controls and collateral information.

Statistical analysis

Description of the sample variables assessed: frequencies and percentages for the qualitative variables, and measures of central tendency for the quantitative variables.

To compare the qualitative sociodemographic and clinical characteristics between the groups starting treatment in 2019 and during the pandemic, in 2020, the χ^2 (chi square) test was used.

Student's t-test for independent groups was used to compare the quantitative variables between both groups.

Results

Study 1. Comparison between receptions 2019 versus 2020

A total of 195 patients were recruited who met the selection criteria (they were not referred to other services and had an SUD diagnosis).

152 (78%) attended reception during the period from March 15 to May 31, 2019, and 43 (22%) during the same period in 2020.

Table 1 shows the sociodemographic characteristics of both groups of patients. As can be seen, a strong pattern emerged of living in a family, with a medical history, living in a flat or house, average educational level, alcohol as the main drug, daily consumption frequency and good health.

The first difference in the period studied between 2019 and 2020 was the decrease in the number (a third) of patients who attended reception.

It may also be observed that in 2020, compared to 2019, more patients were referred from a medical service and fewer came on their own initiative, and that there was a rise in the percentage of patients with a legal record and a fall in the percentage of those with a family history of drug addiction.

No differences were observed in age, sex, main drug for which the patient attended, or the other socio-demographic and clinical variables.

The follow-up of up to twelve months (see Table 2) showed significant differences only in the greater percentage of patients in 2020 who continued being treated at one month and three months, although this difference disappeared later, after one year. Regarding the use of the drug for which they started treatment, no significant differences were observed either at three months or at the last visit for which information was available (at one year, or the last visit in cases of treatment drop-out), perhaps due to the small sample size. In any case, patients from 2020 did not relapse more than those from 2019; conversely, they had slightly higher abstinence rates at three months and when dropping out of follow-up (or at one year of follow-up).

Table 1

Comparison of sociodemographic, clinical and background variables according to the year of admission (2019 vs 2020). Study 1

| | | 2019 (n = 152) | 2020 (n = 43) | Total (n = 195) |
|---------------------------------------|--------------------------------|----------------|--------------------|-----------------|
| Age | | 46.7±13.2 | 45.6±14.2 | 46.5±13.4 ns |
| Sex | Men | 108 (71%) | 29 (67.4%) | 137 (70.2%) ns |
| Origin | Own or family | 54 (35.53%) | 8 (18.60%) | 62 (31.79%) |
| | Medical context | 89 (58.55%) | 34 (79.07%) | 123 (63.08%) |
| | Social services, legal, others | 9 (5.9%) | 1 (2.3%) | 10 (5.1%) * |
| Living arrangements | Alone | 31 (20.4%) | 11 (25.6%) | 42 (21.5%) |
| | Relatives | 91 (59.9%) | 24 (55.8%) | 115 (59%) |
| | Friends and others | 30 (19.7%) | 8 (18.6%) | 38 (19.5%) ns |
| Home | Flat or house | 146 (96%) | 42 (97.6%) | 188 (96.4%) ns |
| Educational level | Low | 16 (10.5%) | 9 (20.9%) | 25 (12.8%) |
| | Medium | 95 (62.5%) | 25 (58.1%) | 120 (61.5%) |
| | High | 41 (26.97%) | 9 (20.93%) | 50 (25.6%) ns |
| Employment situation | Employed | 78 (51.3%) | 15 (34.9%) | 93 (47.6%) |
| | Retired/Disabled | 31 (20.4%) | 10 (23.3%) | 41 (21.03%) |
| | | 43 (28.3%) | 18 (41.9%) | 61 (31.3%) ns |
| Months worked (of the last 6) | | 3.1±2.9 | 3±2.9 | 3.1±2.9 ns |
| Legal record | | 13 (8.5%) | 9 (20.9%) | 22 (11.2%) * |
| Main drug | Alcohol | 96 (63.2%) | 28 (65.1%) | 124 (63.6%) |
| | Cocaine | 16 (10.5%) | 3 (7%) | 19 (9.7%) |
| | THC | 10 (6.6%) | 3 (7%) | 13 (6.7%) |
| | Others | 30 (19.7%) | 9 (20.9%) | 39 (20%) ns |
| Route of administration | Oral | 95 (62.5%) | 25 (58.1%) | 120 (61.5%) |
| | Pulmonary | 27 (17.7%) | 9 (20.9%) | 36 (18.4%) |
| | Intranasally | 18 (11.8%) | 2 (4.6%) | 20 (10.2%) |
| | | 12 (7.8%) | 7 (16.2%) | 19 (9.7%) ns |
| Frequency of consumption last 30 days | Daily | 81 (53.2%) | 24 (55.8%) | 105 (53.8%) |
| | 1-3 days/week | 22 (14.4%) | 2 (4.65%) | 24 (12.3%) |
| | 4-6 days/week | 19 (12.5%) | 5 (11.63%) | 24 (12.3%) |
| | < 1 day/week | 10 (6.5%) | 4 (9.30%) | 14 (7.1%) |
| | Does not consume | 20 (13.1%) | 8 (18.6%) | 28 (14.3%) ns |
| Family history of drug addiction | | 73 (54.8%) | 13 (32.50%) | 86 (44.1%) * |
| Health level | Good | 90 (59.2%) | 23 (53.49%) | 113 (57.9%) |
| | Regular | 51 (33.5%) | 15 (34.88%) | 66 (33.8%) |
| | Bad | 11 (7.2%) | 5 (11.63%) | 16 (8.2%) ns |
| Previous treatments | | 70 (46%) | 22 (51.1%) | 92 (47.1%) ns |

Note. Comparison of means using Student's t test for quantitative variables (Age and months worked). Frequency comparison using χ^2 . * p < 0.05; ns: p not significant.

Table 2

Comparison of the percentage of patients in follow-up at 1, 3 and 12 months and of the abstinence of the patients received, by year of admission (2019 vs 2020). Study 1

| | 2019 (n=152) | 2020 (n=43) | Total (n=195) |
|--|--------------|-------------------|---------------|
| 1 month of follow-up | 97 (63.8%) | 35 (81.4%) | 132 (67.6%) * |
| 3 months of follow-up | 70 (46.1%) | 27 (62.8%) | 97 (49.7%) * |
| 12 months of follow-up | 55 (36.2%) | 14 (32.6%) | 69 (35.4%) ns |
| Abstinence at 3 months (a) | 31 (44.3%) | 13 (48.1%) | 44 (45.4%) ns |
| Abstinence at their last visit (a year or before abandoning treatment) (b) | 68 (44.7%) | 20 (46.5%) | 88 (45.1%) ns |

Note. The percentages in each line (treatment phase) refer to all patients who attended reception, starting treatment (N= 195), except (a), referring only to the 97 patients who continued in treatment at 3 months. (b) referring to the consumption of all 195 patients in the last visit for which data was available. Comparison of frequencies using χ^2 (scores express frequencies, percentages in parentheses). * $p < 0.05$; ns: p not significant.

Table 3

Changes in attendance and substance use in patients, by type of reception (face-to-face vs telephone). Study 2

| Reception | Face-to-face | | | Telephone | | | Total | | |
|---------------------------|----------------|---------|---------|-------------------|-----------|------------|---------------|-------|-------|
| Scheduled | 19 | | | 41 | | | 60 | | |
| Attended reception | 16 (84.2%) | | | 31 (75.6%) | | | 47 (78.3%) ns | | |
| | T | Abs | H | T | Abs | H | T | Abs | H |
| Treatment indication | 10 (62.5%) | 6 (60%) | 6 (60%) | 19 (61.3%) | 9 (47.4%) | 10 (52.6%) | 29 ns | 15 ns | 16 ns |
| Came to first visit | 5 (50%) | 2 (40%) | 2 (40%) | 17 (89.5%) | 8 (47.1%) | 9 (52.9%) | 22 * | 10 ns | 11 ns |
| Follow-up at 3 months | 4 (80%) | 1 (25%) | 2 (50%) | 12 (70.6%) | 4 (33.3%) | 6 (50%) | 16 ns | 5 ns | 8 ns |
| Follow-up at 3 months (a) | 4 (40%) | | | 12 (63.2%) | | | 29 ns | | |
| Abstinence at 3 months | 1 (25%) | | | 1 (8.3%) | | | 16 ns | | |

Note. The percentages in each line (treatment phase) refer to the patients who continued in treatment in the previous line (treatment phase). T: All; Abs: Abstinent at reception; M: Men; (a): of all patients receiving indication for treatment. Comparison of frequencies using χ^2 (scores express frequencies, percentages in parentheses). * $p < 0.05$; ns: p not significant.

Study 2. Comparison between face-to-face versus telephone reception

A sample of 60 patients scheduled for reception was recruited following the inclusion criteria (one patient was scheduled twice, first by telephone and then in person, so only the telephone visit was taken into account). Of these, 40 (66.6%) were scheduled for telephone counselling and the rest (20) in person.

The age of patients scheduled for reception was 44 ± 11 years, with no differences between the sexes, nor were age differences found between the sexes in the subgroup of patients who actually attended or in those who made an appointment to start treatment.

Patients who, after admission, were scheduled to start treatment at the ABU were significantly older than those referred to other facilities (47.7 ± 12 years vs. 41.4 ± 8 years; $t = 2$; $p < 0.05$).

Table 3 shows the progress of patients registered for reception during the period studied, by type of reception (face-to-face or telephone). Each line follows the steps of the patients studied through their treatment, with

progressive drop-out and the smaller number of patients who continued, as summarised here:

60 registered for reception → 47 attended reception (or were telephoned) → 29 were recommended for treatment in the ABU itself (not referred) → 22 attended the first follow-up visit → 16 attended the three-month visit.

As can be seen in Table 3, there were no differences between reception by phone or in person regarding the percentage of patients actually attending reception, nor in the percentage of those who were recommended for treatment in the ABU itself (the other patients were referred to other services considered more suitable for their type of psychopathology, greater proximity to their place of residence or due to the existence of a previous treatment link to the other service). Conversely, the percentage of those attending the first scheduled visit is significantly higher in patients served by telephone than in person (89.5% vs. 50%, respectively).

Among the 22 who attended the first visit after reception, there were no statistically significant differences in the attendance percentage after three months depending on

whether they attended the initial reception in person or by telephone (80% vs. 70.6% respectively). None of the seven patients who did not attend the first visit reappeared at three months.

However, this trend was the opposite of that observed upon analyzing all patients recommended for treatment in the ABU, even if they did not attend the first visit ($N = 29$): those who attended reception in person had a tendency to attend less at three months than those who did so by phone (40% vs. 63.2% respectively; $\text{Chi}^2 = 1.4$; $p = \text{ns}$), although this was not significant either.

All of this suggests that patients with face-to-face reception drop out more than telephone patients when scheduled for the first visit, but subsequently drop out less in the treatment up to three months; nevertheless, these merely seem to be trends without statistical significance given the low number of subjects.

Table 3 shows the comparison of active alcohol or drugs use at the reception stage between face-to-face and telephone patients indicated for follow-up treatment in the ABU. Consumption data at reception was only available for these 29 patients, since many patients who were referred elsewhere did not present an SUD, but rather behavioural addictions, other psychopathologies, or came to obtain information to help a family member. No differences were observed either in the frequency of use between patients attended by telephone or in person, nor in the subsamples of those who continued treatment at the first visit or at 3 months.

Information was also available on the use of alcohol or other drugs at three months among the 16 patients attending until then. Abstinence percentages were low but without statistically significant differences between patients received by telephone or in person (8.3% vs. 25%).

No differences were observed based on gender in the percentages of indications for treatment or follow-up at the first visit or at three months.

Discussion

The main finding of the study was that no worsening in adherence nor in the abstinence rate was observed in the treatment of SUDs after the COVID-19 pandemic or through telephone support instead of face-to-face attention.

The pandemic period saw a fall in the number of receptions carried out in the ABU, consistent with the reduction in care caused by the initial lockdown, the redistribution of professional resources in our health centre, and professionals requiring sick leave due to SARS-CoV2 infection or contact with the infected.

Qualitatively, there were more patients referred from other health facilities and fewer coming in on their own initiative, which could be explained by the mobility

limitations occurring during the pandemic. All this was despite the decrease in care due to COVID-19, highlighting the effort made by the health system to continue offering adequate specialized care.

Initial adherence to the ABU (first month of follow-up) was better in the 2020 pandemic period than in 2019, which was accompanied by a greater adherence to the first visit among patients received by telephone compared to those in person. These facts may indicate a greater motivation in patients who, despite the risks, decided to start treatment for their addiction in the COVID period after lockdown. It also indicates that not only is the telephone route not an impediment, but that it can facilitate treatment adherence, at least initially.

Medium-term follow-up (three months) did not reveal significant differences between the period prior to (2019) and the pandemic itself (2020) nor between patients attended by telephone or in person at reception. Nevertheless, there were trends towards greater adherence of 2020 patients and those welcomed by telephone, although the differences in adherence faded after a year. There was far greater drop-out before the first visit among patients received in person rather than by telephone. Perhaps for this reason, the subsequent drop-out rate of continuing patients, up to three months, was proportionally higher in the telephone group.

Regarding abstinence, this could only be analysed in patients who had followed the treatment, and there were no differences between patients from 2020 and 2019 at three months or until the last visit. There were also no differences in abstinence at three months between patients attended to by telephone or in person.

These data are not necessarily surprising, since it has already been said that they are in line with research in which telephone follow-up compared to standard treatments has produced higher percentages of abstinence in patients with a cocaine SUD (McKay et al., 2005) or a reduction of depressive symptoms in depressed patients (Castro et al., 2020). In some more severe or high-risk patients, a more intensive initial program may improve outcomes.

The low frequency of abstinence at 3 months among the patients of Study 2, compared to Study 1, both with respect to the patients of 2019 and 2020, is surprising. Although different samples were involved, there was a partial overlap in the recruitment period between those of the study (end of March to beginning of September 2020) and the 2020 patients of Study 1 (March to May 2020 inclusive), with the same treatments and professionals. It can be hypothesized that the Study 2 period involved greater clinical risk of relapse since it covered the summer, in which, furthermore, some treatment units were working with fewer resources (toxicological controls, hospitalizations, partial hospitalization, visits, etc.).

Conclusions

Although the two samples were different, results of the analysis coincided in that neither the pandemic nor telephone support led to worse results at three months with respect both to treatment adherence and abstinence rates. In the case of initial adherence, this was even greater during the time of the pandemic, surely due to greater motivation, and in a telephone format due to the speed and ease of access. Subsequently, adherence became more similar to that of pre-pandemic treatments.

Admittedly, less attention was provided in quantitative terms, which must be attributed both to the decrease in the availability of treatments at the ABU, to the limitations of social mobility imposed, and to the fears of patients and the self-restrictions they were able to make in postponing the search for treatments in an ABU.

Looking to the future, our experience suggests that greater flexibility in offering face-to-face treatments together with others online or by telephone, depending on the epidemiological situation or the preferences of patients, does not necessarily imply a decrease in the quality of care, and can maintain abstinence rates and treatment adherence at three months. These telephone or online formats are growing (Uscher-Pines et al., 2020) and should be promoted for economic reasons and because they offer greater flexibility and accessibility, not as a substitute but as a complement to other resources and face-to-face interventions. All this can contribute to an improvement in the overall therapeutic efficiency and in the progress of the patient, the final objective of the treatment.

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Conflict of interests

None declared.

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