

Client Characteristics Associated with Failure to Complete Residential Treatment at a Multicultural Drug and Alcohol Treatment Facility in Antigua, West Indies

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ABSTRACT

The purpose of this study is to compare the demographic and clinical characteristics of clients leaving treatment prior to completion of the 29-day residential stay at a multicultural addiction treatment centre. The charts of 446 clients (62% from the United States of America, 29% from the Caribbean region, 9% European) were reviewed. The mean age was 39.7 years, 33% female, with 91% using alcohol, 49% using cocaine, 25% using opioids (single drug 27%, poly-drug use 73%), with mean 13.1 years of harmful use, 33% using prescribed mental health medications and 46% having had prior residential treatment. Of 446 clients, 76 (17%) did not complete treatment stay. A comparison of clients leaving early and those completing stay revealed no difference in age (38.6 vs 39.9 years) or years of harmful use (11.7 vs 13.4 years). There were trends toward those leaving to be more often female (42 vs 31%, $p < 0.10$) and non-Caribbean (20% American or European vs 12% Caribbean, $p < 0.10$).

Clients who left early were more likely to use opioids (41 vs 22%, $p < 0.001$) and less likely to use alcohol/sedative (83 vs 1%, $p < 0.02$). Cocaine/stimulant use did not differ (49 vs 49%). Those leaving treatment early had greater use of mental health medications (50 vs 29%, $p < 0.001$). Prior treatment was not significantly different (53 vs 44%). An analysis of the 128 clients from the Caribbean region showed 15 clients (12%) failed to complete treatment. Those leaving treatment early were more likely to be female (53 vs 26%, $p < 0.05$), had a trend toward being younger (35.6 vs 39.9 years, $p = 0.19$) and had fewer years of harmful use (8.1 vs 13.1, $p < 0.02$). Ethnicity (73 vs 74% African) and alcohol/sedative (87 vs 94%), cocaine/stimulant (53 vs 65%), and opioid use (0 vs 4%) did not differ. Those leaving were more likely to use mental health medication (47 vs 12%, $p < 0.001$) and there was a trend toward prior treatment (40 vs 23%, $p < 0.10$).

Keywords: Attrition, drug, treatment facility

Características del Cliente Asociadas con el Fracaso para Terminar el Tratamiento Residencial en un Centro Multicultural para el Tratamiento de la Adicción a las Drogas y al Alcohol en Antigua, West Indies

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RESUMEN

El propósito de este estudio es comparar las características demográficas y clínicas de clientes que abandona el tratamiento antes de que cumplan los 29 días de estancia residencial en un centro multicultural de tratamiento a la adicción. Se revisaron las estadísticas de 446 clientes (62% de los Estados Unidos de América, 29% de la región del Caribe, 9% de 'Europa). La edad promedio fue de 39.7 años; 33% eran mujeres; el 91% usaban alcohol; 49% usaban cocaína; 25% usaban opioides (27% droga simple, 73% polidroga), con un promedio de 13.1 años de uso perjudicial; 33% usaban medicamentos bajo prescripción para la salud mental, y 46% habían tenido tratamiento residencial con anterioridad. De 446 clientes, 76 (17%) no terminaron la estancia del tratamiento. Una comparación de clientes que dejan el tratamiento antes de tiempo con aquellos que completan su estancia, no reveló diferencia en cuanto a edad (38.6 contra 39.9-años) o años de uso dañino (11.7 contra 13.4-años). La

tendencia a abandonar el tratamiento fue más frecuente entre las mujeres (42 contra 31%, $p < 0.10$) y los no caribeños (20% americanos o europeos contra 12% caribeños, $p < 0.10$).

Los clientes que abandonaban antes de tiempo eran más proclives al uso de opioides (41 contra 22%, $p < 0.001$), y menos propensos al uso de alcohol/sedativos (83 contra 1%, $p < 0.02$). El uso de cocaína/estimulantes no difirió (49 contra 49%). Los que abandonaron el tratamiento de manera temprana hacían un mayor uso de medicamentos para la salud mental (50 contra 29%, $p < 0.001$). El tratamiento anterior no fue significativamente diferente (53 contra 44%). Un análisis de los 128 clientes de la región del Caribe mostró que 15 clientes (12%) no terminaron el tratamiento. Quienes abandonaban el tratamiento de manera temprana eran con mayor probabilidad mujeres (53 contra 26%, $p < 0.05$), tenía tendencia a ser más jóvenes (35.6 contra 39.9-años, $p = 0.19$) y tenían menos años de uso perjudicial (8.1 contra 13.1, $p < 0.02$). La etnicidad (73 contra 74% africanos) y el uso de alcohol/sedativos (87 contra 94%), cocaína/estimulantes (53 contra 65%), y opioides (0 contra 4%) no difirieron. Los que abandonaban el tratamiento presentaban una mayor probabilidad de usar medicamentos para la salud mental (47 contra 12%, $p < 0.001$) y una tendencia a haber estado sometido a tratamiento con anterioridad (40 contra 23%, $p < 0.10$).

Palabras claves: Abandono, medicamento, centro de tratamiento

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INTRODUCTION

Research at the Crossroads Centre Antigua has shown that clients who fail to complete a 29-day residential treatment centre stay are at very high risk for relapse to addictive drug and alcohol use (1). It would be useful to identify factors associated with failure to complete treatment in order to improve programme content and better meet client needs. There have been efforts to improve the match of clients and treatment over the years (2, 3) and it is known that certain clients present greater treatment challenges than others.

In a variety of treatment settings, client characteristics have been identified as being associated with failure to complete treatment or with dropout from ongoing treatment.

Early treatment termination has been associated with younger age (4–6), female gender (6–10), African ethnicity (4–7, 11–14), the use of cocaine or opioids (8, 15, 16) and mental health diagnosis or treatment (5–8). A report on Caribbean clients suggests that younger age, fewer years of harmful use and cocaine use were associated with early treatment termination (17).

This study compares clinical characteristics of clients leaving treatment prematurely with those completing their 29-day stay. It includes an analysis of a subset of clients from the Caribbean to assess for cultural differences.

SUBJECTS AND METHODS

A retrospective review of the medical records of clients admitted to the Crossroads Centre Antigua from November 1998 to April 2003 was performed. The Crossroads Centre Antigua was established by Eric Clapton in 1998 to provide residential alcohol and drug addiction treatment for clients from the Caribbean region as well as from the United States of America and Europe (18). Admissions were based on self-referral. There is a cost of US \$19 000 for clients, with 25% to 50% reduction for clients from the United States or Europe, 75% reduction for Caribbean clients and 100% re-

duction for clients from Antigua and Barbuda, based on need. About 40% of clients receive discounted rates. All of the clients met the Diagnostic and Statistical Manual of Mental Disorders (4th edition) criteria (19) for alcohol and/or drug dependency. Crossroads Centre Antigua is a 35-bed residential facility providing detoxification under medical supervision, followed by group and individual counselling with a strong 12-step programme orientation. The residential programme is voluntary and requires a 29-day stay for completion.

Data recorded from the charts included age, gender, country of current residence, drug of choice, day of last use, self-identified years of harmful use, prior residential addiction treatment participation and use of mental health medications. Comparisons of data from clients who left treatment *versus* those who stayed for 29 days were done using two-sample *t* test and chi-square test on STAT101 software (Ashley-Minitab, Reading, Massachusetts, 1993). Comparisons with *p*-value over 0.20 are reported as insignificant. Those comparisons with *p*-value over 0.05 but less than 0.20 were considered trends and those less than 0.05 were considered significant.

RESULTS

There were 446 clients who had records reviewed and were included in the study. The sample included 62% of clients residing in the USA, 29% residing in the Caribbean region and 9% residing in Europe. All the Caribbean clients admitted during the study period were included; the sample of clients from the USA and Europe was a randomly selected population admitted during the same time period. Of the 446 clients, 33% were female, mean age 39.7 years, mean 13.1 years of self-identified harmful alcohol or drug use. There were 27% using a single addictive drug and 73% using more than one drug (poly-drug use). Drug use included 91% using alcohol or other sedative drugs such as marijuana and non-

prescribed benzodiazepines, 49% using cocaine or other stimulant such as methamphetamine and 25% using opioids either orally (*eg* hydrocodone) or intravenously (*eg* heroin). A total of 94% were using an addictive drug on the day prior to admission to Crossroads Centre Antigua. A total of 46% had a prior residential treatment experience and 33% were taking a prescribed mental health medication under the care of a healthcare provider at the time of admission.

A total of 76 of 446 clients (17%) failed to complete the 29 residential stay at Crossroads Centre Antigua. Client self-discharge in the first week, considered against medical advice, accounted for 39% of those leaving early. Client self-discharge in weeks two to four, considered against staff advice, accounted for 33% and administrative discharge, considered at staff request, accounted for 28% of those leaving early.

The clinical characteristics of clients leaving early were compared with the clinical characteristics of clients who completed the 29-day residential treatment stay (Table 1). There was no difference in age (38.6 *vs* 39.9 years), years

Table 1: Comparison of clinical characteristics of all clients leaving treatment early compared with those of clients completing a 29-day residential addiction treatment stay.

Characteristic	Left Treatment n = 76	Completed Treatment n = 370	P value
Age (years)	38.6	39.9	NS
Gender (women)	42%	31%	< 0.10
Europe/USA	20%	80%	
Caribbean	12%	88%	< 0.10
Years of harmful use	11.7	13.4	NS
Prior treatment	53%	44%	NS
Alcohol use*	83%	92%	< 0.02
Opioid use*	41%	22%	< 0.001
Cocaine use*	49%	49%	NS
Mental health drugs	50%	29%	< 0.001

* use of drug alone or with other non-prescribed drugs

of self-identified harmful use (11.7 *vs* 13.4 years) or prior treatment experience (53 *vs* 44%) between those who left and those who stayed. There was a trend toward clients leaving treatment to be more likely female (42 *vs* 31%, $p < 0.10$) and European or American than Caribbean (23 and 19% *vs* 12%, $p < 0.10$).

Clients leaving treatment early were statistically significantly more likely to be using opioids (41% *vs* 22%, $p < 0.001$) and less likely to be using alcohol or other sedative drugs (83 *vs* 92%, $p < 0.02$). Cocaine and other stimulant use did not differ (49 *vs* 49%). Those clients who left early were significantly more likely to be using mental health medications (50 *vs* 29%, $p < 0.001$).

There were 128 clients from the Caribbean region in the study group. The clients from Antigua and Barbuda were primarily of African ethnicity (1) and those from other is-

lands were a mixture of those of African ethnicity and those from the ex-patriot community (18). The group was 29% female, 74% African ethnicity, mean age 39.4 years with a self-reported 12.5 years of harmful drug or alcohol use. Of those clients of African ethnicity from the Caribbean, women accounted for 22% (1). Of these clients, 95% were using drugs or alcohol on the day prior to admission. The use of more than one drug of addiction (poly-drug use) was seen in 72% of the clients, with 93% reporting alcohol or sedative use, 63% using cocaine or stimulant and 4% reporting opioid use. Nearly all of the cocaine use consisted of the smoking of "crack" cocaine. Marijuana was the most common drug used in conjunction with either alcohol or cocaine. For those clients using more than one drug, marijuana was the second drug in about 90% of cases. Marijuana was used exclusively in about 5% of clients who were admitted for sedative addiction. A total of 25% had been in prior residential treatment and 16% had been taking a prescribed mental health medication. A total of 15 clients (12%) failed to complete the 29-day residential treatment stay at Crossroads Centre Antigua. Among those leaving treatment, 20% left in the first week against medical advice, 33% left in weeks two to four, against staff advice and 47% were administrative discharges, at staff request.

The clinical characteristics of Caribbean clients leaving treatment early were compared with those of the Caribbean clients who completed treatment (Table 2). The Caribbean

Table 2: Comparison of clinical characteristics of Caribbean clients leaving treatment early compared with those of Caribbean clients completing a 29-day residential addiction treatment stay.

Characteristic	Left Treatment n = 15	Completed Treatment n = 113	P value
Age (years)	35.6	39.9	< 0.20
Gender (female)	53%	26%	< 0.05
Ethnicity (African)	73%	74%	NS
Years of harmful use	8.1	13.1	< 0.02
Prior treatment	40%	23%	< 0.10
Alcohol use*	87%	94%	NS
Opioid use*	0%	4%	NS
Cocaine use*	53%	65%	NS
Mental health drug	47%	12%	< 0.001

* use of drug alone or with other non-prescribed drugs

clients leaving treatment early had a trend toward being younger (35.6 *vs* 39.9 years, $p = 0.19$) and were significantly more likely to be female (53 *vs* 26%, $p < 0.05$). African ethnicity did not differ between groups (73 *vs* 74%). Those clients leaving early had significantly fewer years of self-reported harmful drug and alcohol use than those completing treatment (8.1 *vs* 13.1 years, $p < 0.02$). There was no difference in the use of alcohol or other sedative drugs (87 *vs* 94%), cocaine or other stimulant drugs (53 *vs* 65%) or opioid use (0 *vs* 4%). There was a trend toward Caribbean clients who had prior treatment leaving early (40 *vs* 23%, $p < 0.10$).

The most significant factor associated with leaving treatment early was the use of prescribed mental health medication (47 vs 12%, $p < 0.001$).

DISCUSSION

Attention has been directed toward trying to define the attributes of clients most likely to benefit from different forms of drug and alcohol addiction treatment (2, 3). Identifying characteristics of clients who fail to complete treatment may help to improve client matching. In addition, such information may help treatment programmes change to better address the needs of these clients. The multicultural nature of Crossroads Centre Antigua allows for the examination of factors associated with early departure from treatment across cultures.

Age has been a factor associated with treatment retention both in the USA and Jamaica, with younger clients leaving treatment prior to completion (4–6, 17). This was the experience at the Crossroads Centre Antigua, although among Caribbean clients there was a slight trend toward younger clients being over-represented in the group leaving treatment early.

Gender may affect treatment completion rates. Women tend to leave treatment more often than men (6–10). At Crossroads Centre Antigua, there was a strong trend for women to be over-represented in the group leaving treatment early and for the Caribbean clients, this difference was statistically significant. For those clients of African ethnicity from the Caribbean region, women were under-represented.

In studies from the USA, clients of African ethnicity tend to complete treatment less often than those of European ethnicity (4, 6, 7, 11). At Crossroads Centre Antigua, clients from the Caribbean (74% African ethnicity) had a trend toward completing treatment more often than the clients from the USA or Europe (2% African ethnicity). For the Caribbean clients, ethnicity showed no relationship to treatment completion. The issue of ethnicity and treatment outcomes is complicated by socio-economic factors in the USA (6, 12–14). These factors may not play such a significant role in the Caribbean clients.

Drug Use Factors

Fewer years of self-identified harmful use may be associated with leaving treatment early. This was reported for clients in Jamaica (17). It may be a reflection of younger clients being less likely to complete a treatment stay as noted above. At Crossroads Centre Antigua, years of harmful use did not differ between groups leaving early or completing treatment. For the Caribbean clients, those leaving early had significantly fewer years of harmful use than those completing treatment.

Drug use patterns may be associated with failure to complete or remain in treatment. Clients using alcohol, alone or with other sedative drugs such as marijuana or non-prescribed benzodiazepines, were significantly less likely to

leave treatment early. Those using cocaine and other stimulants (either alone or with other drugs) or opioids (either alone or with other drugs) were more likely to leave – in previous studies from the USA (8,15,16). The clients using opioids, alone or with other drugs, admitted to Crossroads Centre Antigua were significantly more likely to leave treatment early. Those using cocaine or other stimulant drugs, alone or with other drugs were not more likely to leave early. One study from the USA showed no difference in treatment retention for cocaine using clients (7). For Caribbean clients, drug of choice was not associated with leaving treatment early. Very few Caribbean clients were using opioids, the drug most often associated with early departure. The lack of opioid use could be due to lack of availability, expense or drug preference. A previous report from Jamaica suggests that clients using cocaine were more likely to leave treatment than those using other drugs (17).

For the entire group of clients, prior residential addiction treatment was not associated with early treatment termination. There was a trend toward Caribbean clients with prior treatment experience to leave early. Prior treatment, whether completed or not, does not preclude another attempt. Of the Caribbean clients, about 12% had more than one stay at the Crossroads Centre Antigua.

Treatment for a mental health disorder by a healthcare professional was the strongest single factor associated with early treatment termination, both for the entire group and for the Caribbean clients. This is consistent with reports from the USA (5–8). Programmes with a strong psychiatric component may increase retention of clients with mental health disorders (10).

Patients of African ethnicity being treated for alcohol and drug addiction in the USA have rates of about 50% for mental health disorders, similar to patients of European ethnicity (20) but higher (14) and lower rates have been reported (12). At Crossroads Centre, about 40% of non-Caribbean clients were taking a mental health medication on admission. A recent report from Jamaica suggests a co-morbid psychiatric illness in 30% of Caribbean patients admitted with substance misuse to the University Hospital of the West Indies (21). This would suggest that mental health disorders may be underdiagnosed (16%) in the Caribbean clients admitted to Crossroads Centre, Antigua.

Higher retention rates in treatment have been reported for residential programmes (similar To Crossroads Centre Antigua) compared with outpatient programmes, about 75 to 89% versus 18 to 64% (4, 17, 22, 23) but long term results appear to be similar (24) even for dual diagnosis clients (25).

This report has the limitations inherent in a retrospective series from a single addiction treatment centre. Although no bias in client selection is suspected, this cannot be ruled out entirely. Clients were not separated on the basis of drug and alcohol addiction severity (4, 8, 9) or the presence or absence of community or family support (6, 7, 14). Mental health medication prescription use rather than a

confirmed mental health diagnosis at Crossroads Centre Antigua was used in the analysis.

CONCLUSION

In the contemporary residential treatment setting at Crossroads Centre Antigua, clients leaving treatment early were more likely to be female, American or European, less likely to use alcohol, more likely to use opioids and more likely to use mental health medications. Caribbean clients leaving treatment early were a younger, more likely to be female, had fewer years of harmful use, had a prior treatment experience and use mental health medications. The challenge for treatment centres is to develop programmes to address issues presented by women, younger clients with fewer years of harmful use, those using opioids, and especially those bringing mental health issues to treatment. Studies suggest that retention in treatment may not always relate to client characteristics, but may depend more on the frequency, intensity and variety of treatment services available (11, 26, 27).

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