

Six-Month Outcomes for Patients Attending a Substance Abuse Clinic in Hong Kong: A Retrospective Study

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Abstract

The aim of this retrospective study was to demonstrate the effectiveness of the services offered in the two Substance Abuse Clinics (SACs) in the New Territories East Cluster (NTEC) of Hong Kong. The case notes of 99 patients were reviewed. The Christo Inventory for Substance-Misuse Services (CISS) at intake and six months later were recorded. The CISS total scores were 5.9 ± 2.6 and 4.4 ± 2.3 ($t=6.345$, $p<0.001$) at intake and at the six-month follow-up, respectively. The majority of the subjects (64.6%) showed improvement at the six-month follow-up. They demonstrated significant improvement in psychological status ($t=0.5202$, $p<0.001$), drug/alcohol use ($t=4.589$, $p<0.001$), general health ($t=4.500$, $p<0.001$), degree of criminal activity ($t=2.803$, $p=0.006$) and high-risk behaviour (risky sexual behaviour and/or the use of injectable substances; $t=2.755$, $p=0.007$), whereas there was no statistically significant improvement in the areas of social functioning, occupation, working relationships, ongoing support and treatment adherence. The current services provided by the SACs are effective and lead to a better overall outcome, although further improvement is needed in relation to the specific areas of occupation, ongoing support and treatment adherence.

Keywords: CISS; Substance abuse; Treatment outcome

Abbreviations: CBT: Cognitive Behavioural Therapy; CCPSAs: Counselling Centres for Psychotropic Substance Abusers; CISS: Christo Inventory for Substance-Misuse Services; HA: Hospital Authority; NDH: North District Hospital; NTEC: New Territories East Cluster; PWH: Prince of Wales Hospital; SACs: Substance Abuse Clinics

Background

Drug misuse is associated with a variety of somatic and psychiatric disorders, some of which are associated with certain types of drugs. For example, bladder effects [1], cognitive dysfunction [2], dissociative symptoms [2] and depression [2] have been found in chronic ketamine abusers, whereas psychotic symptoms have been reported among methamphetamine and cocaine abusers [3], and heroin abusers are often diagnosed with antisocial and borderline personality disorder [4]. Drug misuse is associated with criminality, with 72-80% of individuals improperly using drugs in Hong Kong being convicted of criminal offences in the past decade [5]. In view of the wide range of medical, personal and social issues found in substance abusers, it is important that they be provided with appropriate treatments.

The Hospital Authority (HA) of the Hong Kong SAR runs seven outpatient Substance Abuse Clinics (SACs) under the auspices of psychiatric services. The SACs accept referrals from counselling centres for psychotropic substance abusers (CCPSAs), voluntary agencies and other health care providers, and they also deal directly with substance users seeking help. SACs offer pharmacological treatments, counselling by social workers and other forms of services, such as pastoral and occupational counselling.

To monitor the quality of the treatments offered by the SACs, it was necessary to devise a uniform outcome measure. Monitoring and outcome evaluation can help to determine which service areas are appropriate and where improvements are needed.

The Christo Inventory for Substance-Misuse Services (CISS) [6] is a brief, simple outcome evaluation tool for drug and alcohol services.

The CISS assesses the severity of different aspects of substance misusers' condition and covers 10 areas, ranging from social functioning to working relationships in the past month. It can be completed from case notes without interviewing the clients. The CISS has four items on skills development (social functioning, occupation, criminal activity and working relationships), four items on physical and mental health (general health, high-risk behaviour [risky sexual behaviour and/or the use of injectable substances], psychological status and drug/alcohol use), and two on structured support, that is, ongoing support and treatment adherence. Items are rated on a three-point Likert scale, where 0='stable', 1='may not be stable' and 2='unstable'. The CISS is widely used in the United Kingdom [7,8], in outpatient services [9], methadone and opiate maintenance treatments [10] and drug intervention programmes [11], to assess the problem severity of drug abusers and to appraise the effectiveness of their treatment.

The objective of the present study was to examine the outcome of patients attending the two SACs operating in the New Territories East Cluster (NTEC) of Hong Kong.

Materials and Methods

Subjects

The two SACs in the NTEC are located at the Prince of Wales

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Hospital (PWH) and the North District Hospital (NDH). Two half-time psychiatrists, one half-time psychiatric nurse and a number of part-time social workers work in both SACs. The mainstays of treatment are pharmacological treatment and counselling by social workers. Such treatment programmes as occupational counselling and recreational services are currently unavailable. The major targets of these two SACs are psychotropic substance abusers. The medical record of consecutive patients attended the two aforementioned SACs from October 2009 to May 2010 were reviewed for age, sex, marital status, education and occupation, substance abuse history, and CISS score at intake and at 6 months follow up [12].

The current project was in compliance with the Helsinki Declaration and it has been approved by Joint Chinese University of Hong Kong-New Territories East Cluster Clinical Research Ethics Committee (Reference number: CRE-2009.129). Written informed consent is not required in this retrospective study, and the collection of patient's information is a part of the routine clinical care.

Statistical analysis

Statistical analyses were performed using the SPSS, Version 17.0 (SPSS, Chicago, USA). Descriptive data are presented herein as means or proportions, as appropriate. Statistical differences were established by a two-tailed paired-sample t-test for normally distributed, continuous data, with the level of significance set at 0.05 (two-sided).

Results

Characteristics of the sample

Subjects' socio-demographic characteristics are shown in Tables 1-3. Their mean age was 34.85 ± 10.23; 62 (61.6%) were men; and 22.2% were primarily methyl amphetamine abusers, 21.2% mainly abused cough mixtures and 17.2% were heroin abusers. The most commonly diagnosed co-existing psychiatric disorder was drug-induced psychosis (46.5%), and 66% of the sample had a criminal record. The majority of subjects were referred by other HA facilities or by general practitioners (77%); thus, they had been under treatment and had been relatively stable at intake to the SACs.

Analysis of total CISS score

The CISS total scores were 5.9 ± 2.6 and 4.4 ± 2.3 at the first assessment and six-month follow-up, respectively, thus exhibiting a 25% reduction over time (t=6.345, p<0.001). Of the 99 patients, 64.6% showed an improvement from the initial assessment to the six-month follow-up, whereas 35.4% either deteriorated (10.1%) or showed no change (25.3%) in their CISS total scores.

Analysis of individual CISS items

The results were mixed regarding the individual CISS items. Subjects displayed different degrees of improvement in different areas, with the exception of ongoing support and treatment adherence (Figure 1). Significant differences were found in the areas of psychological status (t=0.5202, p<0.001), drug/alcohol use (t=4.589, p<0.001), general health (t=4.500, p<0.001), degree of criminal activity (t=2.803, p=0.006) and high-risk behaviour (t=2.755, p=0.007) between the initial assessment and the six-month follow-up (Table 4).

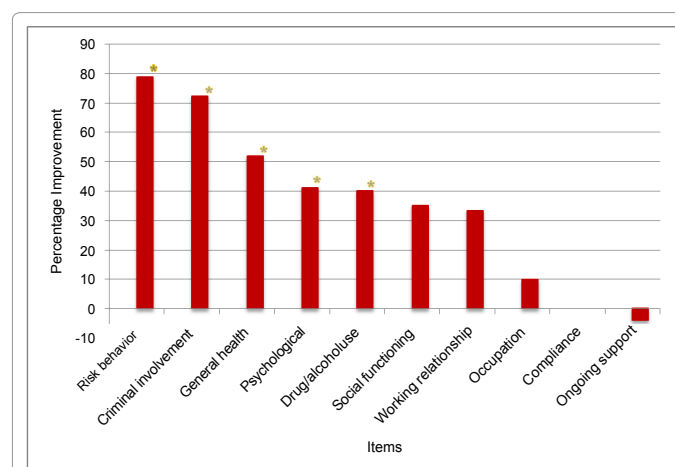
Discussion and Conclusions

The mean value of the CISS at the first assessment in this study was 5.48 ± 2.20, which is considerably lower than the 8.1% reported by Best et al. [11]. The discrepancy can be explained by the different study

populations and sampling methods, as the sample in Best et al. was recruited from the criminal justice system.

Treatment outcomes

The significantly reduced total CISS score indicated overall improvement. Subjects' psychological status, drug/alcohol use, general health, degree of criminal activity and high-risk behaviour all improved significantly, which suggests that the current SAC services are effective in promoting better psychological and physical health and lessening involvement in criminal behaviour. These health-related categories are



*P < 0.05; CISS = Christo Inventory for Substance-Misuse Services.

Figure 1: Changes in individual CISS items between initial assessment and six-month follow-up

	Mean ± s.d./n (%)
Sex (male)	62 (61.6)
Age	34.9 ± 10.2
Marital status	
Single/Divorced/Widowed	62 (61.6)
Married/Cohabiting	38 (37.4)
Occupation	
Unemployed	71 (71.7)
Employed/Other	28 (28.3)
Education	
None	8 (8.1)
Primary	35 (35.4)
F.1-3	38 (38.4)
F.4-5 or above	15 (15.2)
Missing data	3 (3.0)
Age of onset of substance abuse	20.8 ± 8.4
Duration of substance abuse (years)	14.7 ± 9.1
Source of referral	
CCPSAs/Other Social Workers	8 (8.1)
SARDA/GOPD	2 (2.0)
Private doctors/hospital discharge cases	10 (10.1)
Other HA sources	67 (67.7)
Other	11 (11.1)
Missing data	1 (1)
Past criminal record	66 (66.7)
Changes in CISS	
Improvement	64 (64.6)
No change	25 (25.4)
Deterioration	10 (10.1)

CCPSAs = Counselling Centres for Psychotropic Substance Abusers; SARDA = The Society for the Aid and Rehabilitation of Drug Abusers; GOPD = General Out-patient Department; HA = Hospital Authority; CISS = Christo Inventory for Substance-Misuse Services

Table 1: Demographic characteristics of the study sample (N = 99)

Primary drugs	n (%)	Secondary drugs	n (%)
Methylamphetamine ('ice')	22 (22.2)	Nil	61 (61.6)
Cough mixture	21 (21.2)	Ketamine	10 (10.1)
Heroin	17 (17.2)	Zopiclone	9 (9.1)
Ketamine	13 (13)	Midazolam	8 (8.1)
Zopiclone/zolpidem	9 (9.1)	Methylamphetamine	5 (5.1)
Nimetazepam	5 (5.1)	MDMA	4 (4)
Midazolam	3 (3)	Nimetazepam	4 (4)
Alcohol	2 (2)	Alcohol	1 (1)
Other	2 (2)	Cocaine	1 (1)
Cocaine	2 (2)	Cough mixture	1 (1)
Cannabis	1 (1)	Diazepam	1 (1)
Opiates	1 (1)	Flunitrazepam	1 (1)
Solvents	1 (1)	Opiates	1 (1)

Table 2: Frequency of primary and secondary drugs in the sample (N = 99)

Co-existing psychiatric disorder	n (%)
Drug-induced Psychosis	46 (46.5)
Depression	20 (20.2)
Schizophrenia	10 (10.1)
No Diagnosable Psychiatric Disorder	9 (9.1%)
Adjustment Disorder	3 (3)
Dysthymia	3 (3)
Generalised Anxiety Disorder	3 (3)
Psychosis NOS	3 (3)
Agoraphobia	2 (2)
Bipolar Affective Disorder	2 (2)
Drug-induced Mood Disorder	2 (2)
Eating Disorder (NOS)	1 (1)
Hypomania	1 (1)
Personality Disorder	1 (1)
Posttraumatic Stress Disorder	1 (1)

Table 3: Co-existing psychiatric disorders in the sample (N = 99)

	First assessment Mean ± s.d	Second assessment Mean ± s.d	t	pa
CISS total score	5.9 ± 2.6	4.4 ± 2.3	6.345	<0.001
Item scores				
Psychological	1.0 ± 0.8	0.6 ± 0.6	5.202	<0.001
Drug/alcohol use	0.9 ± 0.9	0.5 ± 0.7	4.589	<0.001
General health	0.5 ± 0.6	0.3 ± 0.5	4.500	<0.001
Criminal involvement	0.2 ± 0.5	0.05 ± 0.3	2.803	0.006
Risk behaviour	0.1 ± 0.5	0.03 ± 0.2	2.755	0.007
Social functioning	0.2 ± 0.5	0.1 ± 0.3	1.619	0.109
Occupation	1.2 ± 0.8	1.1 ± 0.8	1.617	0.109
Working relationships	0.06 ± 0.2	0.04 ± 0.2	0.815	0.417
Ongoing support	1.5 ± 0.8	1.6 ± 0.8	-0.761	0.449
Compliance	0.2 ± 0.4	0.2 ± 0.4	0.000	1.000

aPaired-sample t-test; CISS = Christo Inventory for Substance-Misuse Services

Table 4: Patients' changes in CISS score at initial assessment and six-month follow-up (N = 99)

interrelated: as expected, drug/alcohol use was significantly associated with psychological and general health and high-risk behaviour. Psychological status was also a significant correlate of general health and drug/alcohol use. Targeting drug/alcohol use can thus indirectly lead to better overall health.

In contrast to the aforementioned improvements, ongoing support deteriorated over the six-month period. Ongoing support refers to participation in non-medical treatments, mainly counselling.

It seems that patients rely exclusively on drug treatment and ignore counselling. The majority of patients may lack sufficient understanding of the rationale for continuing psychological support. Continuing care requires long-term commitment, as its benefits are not realised immediately. Patients appear to place undue emphasis on medication and overlook the importance of the interrelated precipitating and perpetuating factors that lead to drug abuse and its harmful consequences. It is therefore important that this patient group be educated about the rationale for non-medical treatment modalities and that the value of these modalities be emphasised.

Poor adherence to drug counselling services is associated with a higher risk of relapse because patients are more vulnerable to interpersonal, occupational or spiritual difficulties when they lack counselling [13]. Peer influence [14], living with other drug/alcohol users [14] and high-risk behaviour [15] are significantly associated with poor engagement in continuous care. It may well be that patients consider themselves to be well-adjusted and are relatively satisfied with their lifestyle; thus, they are unlikely to accept referrals to other support services such as those provided by Non-Governmental Organisations (NGOs).

The modest improvement in occupation and working relationships is possibly attributable to the lack of occupational counselling offered at the PWH and NDH. The effectiveness of such counselling [16] and Cognitive Behavioural Therapy (CBT) [17] has been clearly documented with regard to substance abusers' employment status. One-to-one CBT is reported to be effective in achieving abstinence from drugs and alcohol [18]. Due to the limited resources available to the SACs, it is recommended that group CBT be offered, as it is clinically effective but significantly cheaper than individual CBT.

Self-help groups not only provide strong social support to patients, but also structured daily living [19], which, in turn, can improve social functioning and vocational status. Similarly, structured behavioural and social-skills training are also promising avenues for the improvement of psychosocial functioning [20,21], employment [20] and concentration [22]. In short, self-help groups and skills training would be very desirable additions to the services currently available at the SACs as an integral part of the management of patients with substance abuse accompanied by a psychiatric disorder. The current drug/alcohol services provided by the HA through SACs in the NTEC are generally adequate, although they require further strengthening in specific areas.

The present study has methodological limitations. First, the present study examined the effectiveness of the 6-month treatment offered by the SACs in one of the seven service clusters in Hong Kong; future study should warrant a longitudinal design to investigate whether existing service has an impact on the relapse rate in service recipients in all service clusters. Secondly, CISS is a rater-administered scale, although it has not been translated and validated in Chinese population yet, raters in this study who are fluent in English are capable to use this scale to assess patient's condition. Validation study in the Chinese version of this scale should be conducted in the future.

Competing Interests

The authors declare that they have no competing interests.

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None

References

1. Middela S, Pearce I (2011) Ketamine-induced vesicopathy: a literature review. *Int J Clin Pract* 65: 27-30.
2. Morgan CJ, Muetzelfeldt L, Curran HV (2010) Consequences of chronic ketamine self-administration upon neurocognitive function and psychological wellbeing: a 1-year longitudinal study. *Addiction* 105: 121-133.
3. Mahoney JJ 3rd, Kalechstein AD, De La Garza R 2nd, Newton TF (2008) Presence and persistence of psychotic symptoms in cocaine- versus methamphetamine-dependent participants. *Am J Addict* 17: 83-98.
4. Rodríguez-Llera MC, Domingo-Salvany A, Brugal MT, Silva TC, Sánchez-Niubó A, et al. (2006) Psychiatric comorbidity in young heroin users. *Drug Alcohol Depend* 84: 48-55.
5. Central Registry of Drug Abuse Fifty-ninth Report. Hong Kong SAR: Narcotics Division, Security Bureau; 2000-2009.
6. Christo G, Spurrell S, Alcorn R (2000) Validation of the Christo Inventory for Substance-misuse Services (CISS): a simple outcome evaluation tool. *Drug Alcohol Depend* 59: 189-197.
7. Chirsto Research Systems (2000) Outcomes of residential and day care placements for people with drug and alcohol problems, the 2000 evaluation for Hammersmith & Fulham Social Services 1.10.98 to 30.9.99. London, UK.
8. Day E, Best D, Copello A, Young H, Khoosal N, et al. (2008) Characteristics of drug-using patients and treatment provided in primary and secondary settings. *Journal of Substance Use* 13: 27-35.
9. Moselhy HF, El-Sheikh H (2004) Outpatient treatment of cocaine dependence with Dexamphetamine. *Addictive Disorders & Their Treatment* 3: 133-137.
10. Pinto H, Rumball D, Maskrey V, Holland R (2008) A pilot study for a randomized controlled and patient preference trial of buprenorphine versus methadone maintenance treatment in the management of opiate dependent patients. *Journal of Substance Use* 13: 73-82.
11. Best D, Day E, Morgan B, Oza T, Copello A, et al. (2009) What treatment means in practice: An analysis of the delivery of evidence-based interventions in criminal justice drug treatment services in Birmingham, England. *Addiction Research & Theory* 17: 678-687.
12. Arif A, Hughes PH, Khan I, Khant U, Klett CJ, et al. (1987) Drug dependence: a methodology for evaluating treatment and rehabilitation. WHO Offset Publ : 1-67.
13. O'Connell D, Beyer E (2002) *Managing the Dually Diagnosed Patient: Current Issues and Clinical Approaches*. Second edition, Haworth Press, New York, USA.
14. Garner BR, Godley MD, Funk RR, Dennis ML, Godley SH (2007) The impact of continuing care adherence on environmental risks, substance use, and substance-related problems following adolescent residential treatment. *Psychol Addict Behav* 21: 488-497.
15. McKay JR, McLellan AT, Alterman AI, Cacciola JS, Rutherford MJ, et al. (1998) Predictors of participation in aftercare sessions and self-help groups following completion of intensive outpatient treatment for substance abuse. *J Stud Alcohol* 59: 152-162.
16. Stoffel VC (1994) Occupational therapists' roles in treating substance abuse. *Hosp Community Psychiatry* 45: 21-22.
17. Bogenschutz MP, Geppert CM, George J (2006) The role of twelve-step approaches in dual diagnosis treatment and recovery. *Am J Addict* 15: 50-60.
18. Weiss RD, Griffin ML, Greenfield SF, Najavits LM, Wyner D, et al. (2000) Group therapy for patients with bipolar disorder and substance dependence: results of a pilot study. *J Clin Psychiatry* 61: 361-367.
19. Tsuang J, Fong TW, Lesser I (2006) Psycho social treatment of patients with schizophrenia and substance abuse disorders. *Addictive Disorders & Their Treatment* 5: 53-66.
20. Jerrell JM, Ridgely MS (1995) Comparative effectiveness of three approaches to serving people with severe mental illness and substance abuse disorders. *J Nerv Ment Dis* 183: 566-576.
21. Tiet QQ, Mausbach B (2007) Treatments for patients with dual diagnosis: a review. *Alcohol Clin Exp Res* 31: 513-536.
22. Mueser KT, Drake RE, Bond GR (1997) Recent advances in psychiatric rehabilitation for patients with severe mental illness. *Harv Rev Psychiatry* 5: 123-137.