

THE SUBSTANCES AND CHOICES SCALE

MANUAL

The SACS is only to be used by health professionals working with young people who are engaged in a treatment or support agency.

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1.0 Introduction

The Substances and Choices Scale (SACS) is a brief screening and outcome measurement instrument for assessing and monitoring the use and impact of alcohol and drugs in young people. It is designed to be used by health professionals working with young people that are engaged in a treatment or support agency. It is a one-page pencil and paper instrument that is self-administered and takes about 5 minutes to complete. It measures the frequency of use of a range of substances, and records the symptoms, behaviours and consequences associated with substance use over the previous month. It yields a 'SACS difficulties score' out of 20 that can be used to track progress in treatment. It has been designed in a similar structure and format to the Strengths and Difficulties Questionnaire (SDQ), which has a proven track record in services, and been validated for use around the world (Woerner *et al.* 2004). Our intention is that the SACS should be used with the SDQ; the combination of instruments thereby assisting in screening and measuring functioning across a spectrum of psychosocial functioning including emotional symptoms, conduct problems, prosocial behaviour, peer relations, attention/hyperactivity symptoms, and the frequency, pattern and harm related to substance use.

1.1 Background

One method of improving the delivery of substance use treatment in different types of services is via the use of screening and outcome measurement instruments (Bickman *et al.* 1999). Screening and outcome measurement instruments are utilised in AOD treatment to detect and identify those at risk of substance use disorder (SUD) and related harm, and monitor progress in treatment (Grella *et al.* 2001). Usually these instruments consist of a number of questions or items which, following completion by a client, can be scored and compared over time (or against population means) to monitor progress. Regular use of such instruments is likely to raise awareness of substance use problems amongst the clients of AOD and mental health workers, and increase the focus on AOD treatment (Andrews *et al.* 1994).

The literature, although somewhat underdeveloped, is clear that the direct application of adult assessment and treatment modalities to adolescent populations is inappropriate in that it ignores the different circumstances of their developmental stage (Deas *et al.* 2000). Although some of the difficulties and consequences that young people experience are similar to those of adults, many are not. Studies have shown that young people use substances in a different manner and for different reasons than adults. For example, significant changes in the pattern of substance use, including moderation and cessation, are more likely to occur in adolescence than in adulthood, when choice of substance and pattern of use have had time to become more firmly established (Kaminer 1999). Young people tend to use in a binge pattern that is dependent on availability of substances rather than particular preference. They are also likely to use a number of different substances (Stewart and Brown 1995; Deas *et al.* 2000), compared to adults who are more likely to

have settled on a preferred substance. However patterns of dependent use can become established more quickly in adolescents for substances other than alcohol. For example, clinical samples show higher rates of cannabis dependence than cannabis abuse and high rates of tolerance symptoms (Winters *et al.* 1999).

A number of AOD instruments have been designed specifically for use in adolescent populations. Whilst many of these have reasonable psychometric properties, most have problems associated with their routine use. For example, instruments such as the DUSI-R (Drug Use Screening Inventory-Revised) (Kirisci 1995) or the POSIT (Problem Oriented Screening Instrument for Teenagers) (Latimer *et al.* 1997) are long (approx 90 -150 items) and unwieldy. The PESQ (Personal Experience Screening Questionnaire) (Winters 1992) and the SASSI (Substance Abuse Subtle Screening Inventory) (Miller 1997) are sound and relatively brief instruments, but their use involves considerable cost. Other instruments have been designed to screen for either alcohol *or* drugs (rather than both) and thus have limited utility in young people who are often polysubstance users (Bachman *et al.* 1997; Harrison *et al.* 1997; Deas *et al.* 2000). Finding an instrument that can be used easily in day to day practice, and with no financial cost, has proven difficult.

The Strengths and Difficulties Questionnaire (SDQ) is an example of a widely used youth self-completed instrument that is highly acceptable, free of charge and easily accessible on the Internet. It assesses mental health symptoms and general functioning but does not assess substance use behaviours or their implications. Substance use disorder is under recognised in adolescent clinical samples (Greenbaum *et al.* 1991; King *et al.* 2000) despite occurring in around 40% of young people attending psychiatric services (Wilens 1997; Aarons *et al.* 2001). The use of the SDQ in mental health services may inadvertently reinforce this lack of recognition of substance use issues, and substance use difficulties will continue to be overlooked.

The Substances and Choices Scale (SACS) has been developed to complement the SDQ and be used in tandem with it. The SACS is similar in format to the SDQ, to allow the two instruments to be used together. The SACS is free-of charge and will be readily accessible. We believe this new brief instrument is superior to other available AOD instruments on account of its format, acceptability (to clinicians as well as clients), brevity and excellent psychometric properties.

2.0 Description of the SACS Instrument

2.1 Time frame

The SACS instrument asks about functioning over the *previous month*. Young people's recall of their substance use over this time frame is reliable (Martin *et al.* 1998). Historically 90 days has been taken as a sufficient treatment length for measuring outcome (Hser *et al.* 2001) however most young people stay in treatment for shorter periods than this (Dennis *et al.* 2004) Often their substance will tend to fluctuate through the year (depending on exams, holiday periods, treatment engagement etc).

2.2 Structure of the SACS

The SACS instrument consists of three sections.

- Section A is a table structured similarly to the WHO instrument, The ASSIST (WHO ASSIST Working Group 2002), recording the *frequency of occasions of use* over the last month of a range of substances. Specified time frames include '*never*', '*once a week or less*', '*more than once a week*', and '*most days or more*'. Substances specified include alcoholic drinks, cannabis, cocaine, amphetamines, ecstasy and other party drugs, inhalants, sedatives hallucinogens, opiates and BZP. In addition an 'other drugs' category provides scope for subjects to write in any other substances they have used over the previous month. In order to aid comprehension for subjects completing the instrument, the 'street' names of substances are alongside their scientific names (e.g. weed, marijuana, pot, skunk etc. for 'cannabis').
- Section B assesses *alcohol and drug taking behaviour, symptoms and impacts/consequences* over the last month. It consists of ten individual statements that are presented in the same format as the SDQ (e.g. '*I took alcohol or drugs when I was alone*'). Five of these statements explore the context of use, and five look at behaviours indicative of serious consequences of use or harm. Subjects are required to select a response from a 3-item likert scale ('*not true*', '*somewhat true*' or '*certainly true*').
- Section C records *frequency of tobacco use* over the last month similar to the first section

2.3 Two versions of the SACS

One of the principles of the SACS project was to create an instrument that was very acceptable, easy to access and would be widely used.

However the consultation process during the SACS development revealed that agencies and clinicians may be deterred from using the SACS on account of the perception (misguided we believe) that exposing young people to the names of what is available might

increase interest in drugs. To address this we created a community version of the SACS that does not list a wide range of substances.

The clinical and community version of the SACS differ only in terms of the content of Section A.

- The SACSclinical (clinical version) – prompts the young person about their use of a wide range of substances and provides spaces for them to record ‘other drug use’.
- The SACScommunity (community version) – only prompts the young person about their use of alcohol and cannabis but has spaces for the young person to record ‘other drug use’.

- We encourage use of the clinical version of the SACS -

3.0 Administering and scoring the SACS

This section provides information about the steps involved in administering and scoring the SACS. Please note that the accuracy of the SACS is dependent on the honesty of the young person completing it, hence the recommendation that it is used as part of an ongoing intervention package. A low score may not be true reflection of a young person's difficulties if they are minimising their use and difficulties. The converse may also be true in that young people may overstate their problems when filling out the SACS. The SACS should only be used by health or allied professionals working with young people who are engaged in a treatment or support agency.

3.1 General overview

- The SACS should only be used by health or allied professionals working with young people who are engaged in a treatment or support agency.
- The SACS is a brief self-completion questionnaire, and typically takes around 5 minutes to complete.
- Clients should be provided with a pen and encouraged to complete the instrument themselves.
- The clinician can remain in the room with the subject and be available to answer questions or provide support if required.
- If the client seeks clarification on specific questions or phrases, they should be encouraged to answer the question, as they understand it.
- If there is confusion or uncertainty over the form-filling process a brief clarification or explanation is acceptable as long as the clinician is not assisting with the actual answer.

3.2 Administering the SACS

There are key times when it will be appropriate to administer the SACS to a client, as follows:

- *At their initial assessment:* Young people will make changes to their substance use from the start of treatment. Ideally the SACS should be completed during the client's initial assessment (and preferably in the first session).
- *During treatment:* in order to monitor clients' progress over time, the SACS should be repeated after four weeks, and after this every three months. Improvement or otherwise can be readily tracked and used to reflect on the past and future. The SACS can be used as a motivational tool to assist young people to plan towards goals.
- *At discharge:* this should be undertaken at the client's final appointment. If this is not possible, the SACS can be sent out in the post (enclose a self addressed envelope to aid the return of the questionnaire).

The SACS should not be undertaken when the client is:

- intoxicated
- very distressed
- exhibiting active symptoms of severe mental illness
- reluctant or unwilling to participate.

3.3 *Introducing the SACS to clients*

When presenting the SACS to clients, it is recommended that they be provided with an information sheet about the instrument and what their involvement in completing it entails. This document outlines what the SACS is, how the information collected will be used, the benefits of participation, the confidential and voluntary nature of their involvement, and guidance on how to complete the questionnaire.

A succinct and straightforward verbal explanation should also be provided as follows:

- *Part of the assessment and treatment process involves asking clients about their alcohol and drug use.*
- *This process is designed to help you and your clinician, identify any issues or difficulties with your use of different substances, and will help us to better plan your treatment.*
- *It involves filling out a simple form that asks about your alcohol and drug use over the last month. It will take no longer than 5-10 minutes to complete.*
- *All information collected will be kept confidential.*
- *It's up to you whether or not you take part in this.*

3.4 *Scoring the SACS*

Each section of the SACS is scored as follows:

1. *Section A - SACS use scores*

These are interpreted individually as a means to track occasions of use.

- If your client finds it useful to ascribe numbers to these scores then score
 - *Never* = 0
 - *Once a week or less* = 1
 - *More than once a week* = 2
 - *Most days or more* = 3
- For uncompleted items, score 0, however as there is no SACS use total score, this is not usually necessary.

2. *Section B - SACS difficulties score*

The items in this section are added together to yield a score that can be tracked over time

- Each item (statement) in section B is scored
 - *Not true* = 0
 - *Somewhat true* = 1
 - *Definitely true* = 2

- Add together the individual scores for each item (1-10)
- The total (SACS difficulties score) may therefore range from 0-20
- If there is 1 incorrectly completed item, score that item as 0 and add the scores up as usual.
- 2 incorrectly completed items invalidates the SACS difficulties score. Write invalid in the SACS difficulties score box.

3. Section C - SACS tobacco score

This is scored in the same way as section A.

3.5 Interpreting the SACS scores

The key part of the SACS is section B, the SACS difficulties score. The ten items in section B yield a numerical score out of twenty, which reflects the severity of a young person's substance related difficulties at a distinct point in time. The SACS difficulties score can be tracked over the course of a treatment episode and following discharge, via repeated administrations of the instrument. Repeating the SACS at intervals during treatment will provide useful comparative data. It is important to remember that the SACS is a screening tool – and whilst it may provide help in identifying problem areas, it does not yield diagnoses.

- A high score indicates the need for further assessment. The clinician should refer back to the individual items on the SACS to identify particular areas of focus.
- A low score does not rule out problems. Young people commonly under-report their substance use and may not answer the SACS honestly.
- Comparing changes in SACS scores over time can assist with treatment planning and feedback, but again it should be recognised that this may not necessarily reflect actual progress.

Sections A and C – SACS use scores

- This scale has not been formally validated.
- However high scores in this section (i.e. use that is '*more than once a week*' or '*most days or more*') do correlate with high SACS difficulties scores. As such they are a practical guide of a young person's use over the last month
- Remember this is a record of the number of occasions of use but not of how much is used on each occasion.
- This question should lead to further discussion about amounts and patterns of use (such as bingeing).

Section B – SACS difficulties score

- This scale has been validated and has excellent psychometric properties.
- It is a reliable and valid measurement of substance related difficulties.
- A high score should refer the clinician back to review the individual items.
- Beyond this, the bullet points below summarise how to interpret the SACS scores.

- Scores 2 or above usually indicate the need for further assessment. Over 80% of our community sample scored less than 2.
- Scores 4 or above will, in most cases, indicate problems which are of clinical severity and are likely to require intervention. During testing of the SACS, 75% of those in our clinical sample had scores of 4 or greater.
- Scores 6 or above are indicative of serious problems as might usually be seen in a specialist substance use service. During testing of the SACS about 60% of our clinical sample had scores of 6 or over whereas only 4% of the community sample scored this highly on the SACS.

The SACS is only to be used by health professionals working with young people who are engaged in a treatment agency.

4.0 Overview of the development and testing of the SACS

The SACS instrument was developed via a two stage process. Firstly, a consultation and pilot phase was undertaken. Secondly, the instrument underwent psychometric testing (please see Section 5.0 for a detailed review of the results of this process).

4.1 *Development stage*

- A preliminary version of the SACS instrument was developed for the first stage of the project. This was informed by a literature review, which shaped the nature and content of the items included for measurement, as well as the overall design of the instrument. Some questions were created and others from established screening and outcome measurement instruments were adapted to the SDQ format. At the outset, twenty-eight SACS items were assembled in a preliminary instrument.
- Consultation around this initial version of the instrument was undertaken with youth health and AOD workers via an email questionnaire.
- The preliminary instrument was then administered to young people attending youth AOD treatment services. After completing the preliminary SACS instrument alone, participants were interviewed about the understandability, acceptability and face validity of each of the SACS items via a researcher-administered questionnaire. The feedback from both clinicians and clients led to modifications of the SACS instrument and the removal of thirteen items.
- A focus group of young people who were past or present consumers of a youth health service (non-AOD) then participated in a similar consultation process.
- Following this, the fifteen item instrument was piloted in a combined clinical and community (secondary school pupils) population. Item analysis (using discriminant function analysis) of the participants' responses was carried out to ascertain both the validity of this scoring system and the relative discriminant values of each item. Using these results, and with reference to the literature, the final combination of ten SACS items was obtained.

4.2 *Psychometric testing stage*

- Psychometric testing was undertaken on a sample of 651 young people, drawn from three secondary schools ('community' sample, n=531) and three treatment agencies ('clinical' sample, n=120). All participants were aged between 13 and 18 years.
- 'Community' participants completed the SACS questionnaire at their school, in a confidential setting. Members of the research team attended classes, provided an overview of the SACS project, distributed questionnaires and other documentation, and were present throughout the data collection process.
- 'Clinical' participants completed the instrument during a regular counseling session at their treatment service. Their clinician provided an overview of the SACS project, and was present throughout the process.
- The SACS was administered with the SDQ and two validated adolescent AOD instruments (Knight *et al.* 2003), the CRAFFT and the Problem Oriented Screening

Instrument for Teenagers (POSIT.) The CRAFFT is a brief, valid six item screening instrument that asks for Yes/No responses to questions about past substance use behaviours (i.e. have you ever?). The POSIT is a 150 item instrument made up of a number of subscales. We utilised the substance use subscale (17 items), which has been validated for use alone. The entire clinical population completed both the CRAFFT and the POSIT. Community participants completed either the CRAFFT or the POSIT but not both.

- The SACS was administered a second time to two smaller subsets of the community population at intervals of one and three weeks to ascertain test-retest reliability.
- The SACS was also administered a second time (four to eight weeks later) to a subset of the treatment population to assess its capacity to measure change over a treatment period.
- Results of the psychometric testing stage are described in section 5.0 Psychometric properties of the SACS, to follow.

5.0 Psychometric properties of the SACS difficulties scale

5.1 Characteristics of the testing sample

The SACS difficulties scale was tested in a clinical and community population of young people. Table 2. displays demographic data for the total sample (n = 651) and clinical (n = 120) vs. community (n = 531) samples). There was no significant difference in age or gender between the two groups, however the difference in the ethnicity (in particular the under-representation of Asian young people in the clinical sample) was significant.

Table 2: Demographic characteristics of the community, clinical, and total samples.

		Clinical sample n=120 n (%)	Community sample n=531 n (%)	Total n=651 n (%)	Chi ² (df) p value
Age (years)	13	8 (7%)	59 (11%)	67 (10%)	NS*
	14	17 (14%)	137 (26%)	154 (24%)	
	15	32 (27%)	129 (24%)	161 (25%)	
	16	29 (24%)	77 (15%)	106 (16%)	
	17	17 (14%)	82 (15%)	99 (15%)	
	18	17 (14%)	39 (7%)	56 (9%)	
Mean age (s.d.)		15.7 (1.4)	15.2 (1.5)	15.3 (1.5)	
Gender	Males	70 (58%)	270 (51%)	340 (52%)	1.9(1) p = 0.16
	Females	50 (42%)	256 (48%)	306 (47%)	
Ethnicity	European	65 (54%)	242 (46%)	307 (47%)	66(4) p < 0.05
	Māori	37 (31%)	51 (10%)	88 (14%)	
	Pacific	14 (12%)	70 (13%)	84 (13%)	
	Asian	2 (2%)	152 (29%)	154 (24%)	
	Other	1 (<1%)	14 (3%)	15 (2%)	
Living situation	Independently	5 (4%)	0 (0%)	5 (<1%)	97(3) p < 0.01
	Parents	86 (72%)	510 (96%)	596 (92%)	
	Other relation	19 (16%)	19 (4%)	38 (6%)	
	CYFS	10 (8%)	0 (0%)	10 (2%)	

NS*, no significant difference between groups on Kolmogorov-Smirnov 2 sample test; CYF, 'in social services custody/placement'

5.2 Reliability

5.2.1 Internal consistency

Two internal consistency estimates of reliability were calculated using item responses for the SACS difficulties items from the combined community and clinical sample (n=633).

- *Coefficient Alpha* - 0.91.
- *Split-half reliability* - The item responses were split into two groups (items 1,3,5,7,9 vs. items 2,4,6,8,10); the Spearman-Brown corrected correlation (split-half coefficient) was 0.93.

5.2.2 Test-retest reliability (stability)

This was estimated by computing Pearson product-moment correlation coefficients (r) from repeated administrations of the SACS in subsets of the community population after 1 week (n = 78) and after 3 weeks (n = 83).

- The 1 week test-retest stability coefficient was 0.91 (p < 0.01)
- The 3 week test-retest stability coefficient was 0.88 (p < 0.01)

5.3 Validity

5.3.1 Congruent Validity

Two congruent validity coefficients were obtained from comparing the scores of the SACS difficulties score against two established youth AOD instruments in both community and clinical populations.

- The CRAFFT (n = 366), Pearson correlation coefficients (r) = 0.80 (p < 0.01)
- POSIT (n = 382), Pearson correlation coefficients (r) = 0.90 (p < 0.01)

The SACS scores were also compared against the subscales and the total score of the Strengths and Difficulties Scale (SDQ). Table 2. details the Pearson product-moment correlation coefficients for these comparisons.

Table 2: Pearson r correlations of SACS difficulties scores vs. other instrument scores (and subscales)

	CRAFFT	POSIT	SDQ emotional symptoms	SDQ conduct problems	SDQ hyper-activity	SDQ peer problems	SDQ prosocial behaviour	SDQ total
r =	.80*	.90*	.27*	.53*	.42*	.15*	-.09**	.50*
(n)	(366)	(382)	(618)	(624)	(613)	(620)	(620)	(583)

* correlation is significant at the 0.01 level. **correlation is significant at the 0.05 level.

5.3.2 Concurrent Validity - Discriminant Function Analysis

Table 3 shows the distributions of SACS difficulties scores for the community and clinical groups respectively.

Table 3 Frequency (n) of SACS difficulties scores by population

SACS difficulties score	Clinical population	Community population	Total
0	8	355	363
1	8	59	67
2	6	34	40
3	4	21	25
4	4	13	17
5	4	7	11
6	10	4	14
7	10	8	18
8	6	4	10
9	9	5	14
10	3	2	5
11	4	2	6
12	12	1	13
13	4	1	5
14	4	0	4
15	1	0	1
16	8	0	8
17	8	0	8
18	2	0	2
19	1	0	1
20	1	0	1
Total	117	516	633

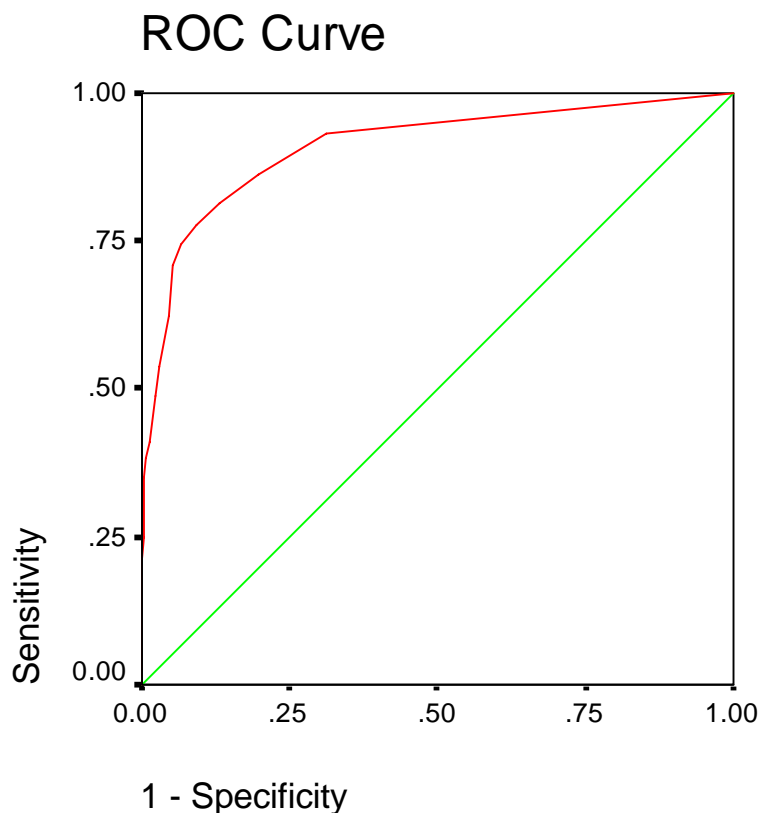
Applying discriminant function analysis to the data from both the clinical and community groups yielded the results below. The SACS scale correctly identified 90% as from either the clinical or community group (Table 4).

Table 4: Discriminant function analysis classification results

Clinical or community population		Predicted Group Membership		Total	
		Clinical	Community		
	n	Clinical	87	30	117
		Community	34	482	516
	%	Clinical	74.4	25.6	100.0
		Community	6.6	93.4	100.0

5.3.3 Concurrent validity - Receiver operating characteristics (ROC)

A ROC curve estimate (no cross-validation) was calculated using the SACS difficulties score to predict membership of the clinical or community sample. The area under the curve was 91% indicating high predictive value for the test



Diagonal segments are produced by ties.

A SACS score of 2/20 predicted membership of the clinical group with a sensitivity of 86% and a specificity of 81%. This estimate is however conservative as some of the clinical cases were not actively using substances at the time i.e. they attended for support around a significant other's substance use or were attending for relapse prevention work. Also there will be undeclared clinical cases in the community sample. See table 5.

Table 5 Frequencies of SACS difficulties scores (%) in community vs. clinical populations

SACS difficulties score	Clinical %	Clinical cumulative%	Community %	Community cumulative %	Sensitivity %	Specificity %
0	6.8	6.8	68.8	68.8		
1	6.8	13.6	11.4	80.4	93	69
2	5.1	18.7	6.6	86.7	86	81
3	3.4	22.1	4.1	90.8	81	87
4	3.4	25.5	2.5	93.3	78	91
5	3.4	28.9	1.4	94.7	74	93
6	8.5	37.4	.8	95.5	71	95
7	8.5	45.9	1.6	97.1	62	96
8	5.1	51.0	.8	97.9	53	97
9	7.7	58.7	1.0	98.9	49	98
10	2.6	61.3	.4	99.3	41	99
11	3.4	64.7	.4	99.7	39	
12	10.3	75.0	.2	99.9	35	
13	3.4	78.4	.2	100	25	
14	3.4	81.8	0		21	
15	.9	82.7	0		18	
16	6.8	89.5	0		17	
17	6.8	96.3	0		10	
18	1.7	98.0	0		03	
19	.9	98.9	0		02	
20	.9	100	0		01	
Total	117 (18.5)		516 (81.5)			

5.3.4 Construct Validity

The dimensionality of the 10 items in the SACS was analysed by carrying out a factor analysis using the correlation matrix from the community sample (n = 533). Principle components analysis (unrotated) of the SACS difficulties items yielded two factors that accounted for 49% of the item variance. All items loaded onto the first factor accounting for 37% of the variance. All items loaded higher on the first factor than for the second factor except for item 10.

Table 6. SACS difficulties score component matrix

SACS difficulties score component matrix	Component	
	1	2
Item		
1. I took alcohol or drugs when I was alone	.556	-.536
2. I've thought I might be hooked or addicted to alcohol or drugs	.594	-.499
3. Most of my free time has been spent getting hold of, taking, or recovering from alcohol and drugs	.685	-.091
4. I've wanted to cut down on the amount of alcohol and drugs that I am using	.629	-.245
5. My alcohol and drug use has stopped me getting important things done	.759	-.025
6. My alcohol or drug use has led to arguments with the people I live with (family, flatmates or caregiver etc.)	.579	0
7. I've had unsafe sex or an unwanted sexual experience when taking alcohol or drugs	.545	.258
8. My performance or attendance at school (or at work) has been affected by my alcohol or drug use	.700	.384
9. I did things that could have got me into serious trouble (stealing, vandalism, violence etc) when using alcohol or drugs	.557	.262
10. I have driven a car while under the influence of alcohol or drugs (or have been driven by someone who was under the influence of alcohol or drugs)	.428	.522

5.4 Ability to detect change

46 clinical participants that remained in treatment repeated the SACS after 4 weeks (mean repeat interval was 5 weeks).

The mean (sd) SACS difficulties score for the first administration was 9.2 (5.1) and for the second, 5.3 (4.2), a difference of 3.9. The range of change in the SACS difficulties score extended from a decrease in score (improvement) of 16, to an increase (worsening) of 10.

Table 8: Range of change in SACS difficulties score in 46 treatment cases

	Change in SACS score	Frequency	%	Cumulative Percent
W	-10.00	1	2.2	2.2
O	-5.00	1	2.2	4.3
R	-3.00	1	2.2	6.5
S	-2.00	2	4.3	10.9
E	-1.00	2	4.3	15.2
	.00	7	15.2	30.4
I	1.00	3	6.5	37.0
M	2.00	5	10.9	47.8
P	3.00	2	4.3	52.2
R	4.00	4	8.7	60.9
O	6.00	3	6.5	67.4
V	7.00	3	6.5	73.9
E	8.00	1	2.2	76.1
	9.00	3	6.5	82.6
	10.00	3	6.5	89.1
	11.00	1	2.2	91.3
	12.00	2	4.3	95.7
	14.00	1	2.2	97.8
	16.00	1	2.2	100.0
	Total	46	100.0	

5.4.1 General Linear Model (GLM) for repeated measures

To determine whether this difference represented a significant change over time a one-way within-subjects general linear model for repeated measures was conducted in the 46 clinical participants who repeated the SACS after 4 weeks of treatment.

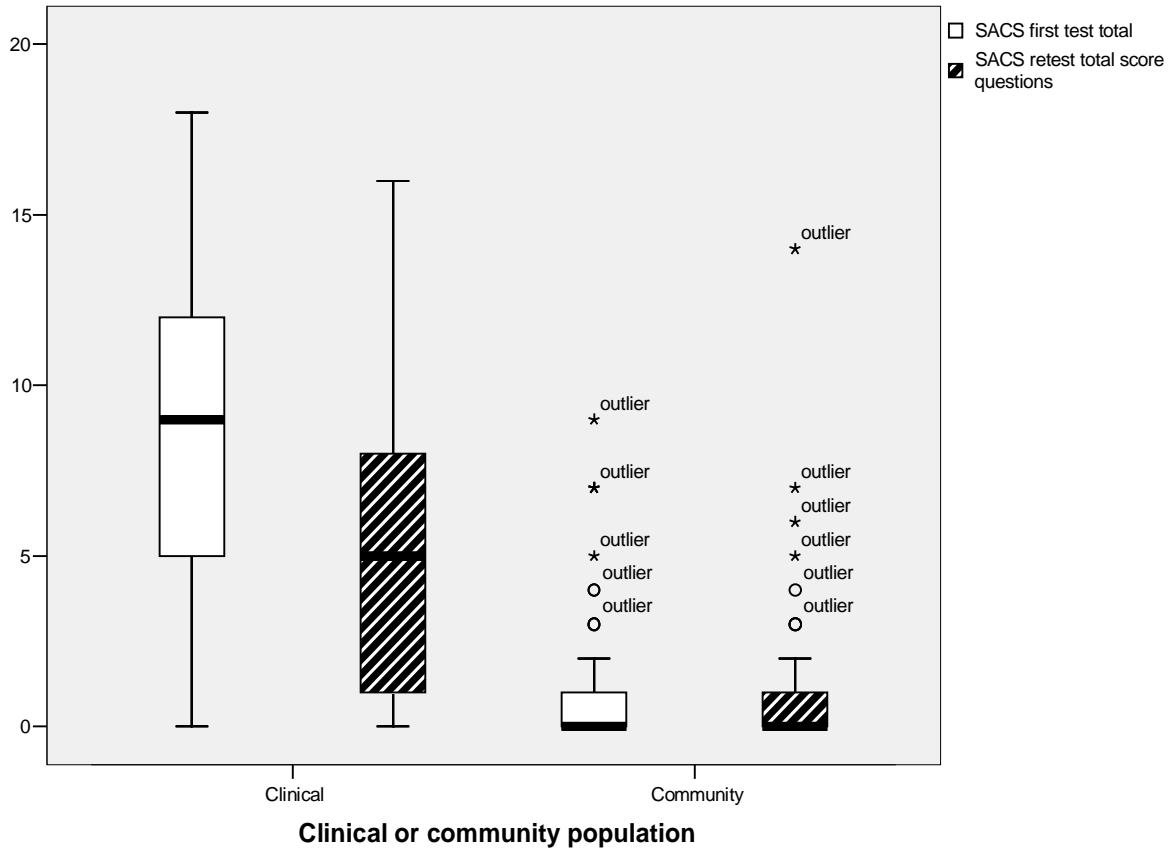
The GLM results indicated a significant time effect in the treatment sample.

- Wilks' Lambda = 0.64, $F(1,45) = 25$, $p < 0.01$.
- Post hoc paired t-test; mean diff. = 3.91, SD = 5.31, $t(45) = 5.00$, $p < 0.01$

A similar analysis conducted on the community participants (not in treatment) who repeated the SACS after 3-weeks (n=80) revealed no significant difference between the mean scores over time.

- Wilks' Lambda = 0.99, $F(1,79) = 0.38$, $p = 0.54$
- Post-hoc paired t-test; mean diff. = 0.11, $SD = 1.64$, $t(78) = 0.62$, $p = 0.54$.

Figure 1. Comparison of test and re-test scores for clinical and community populations



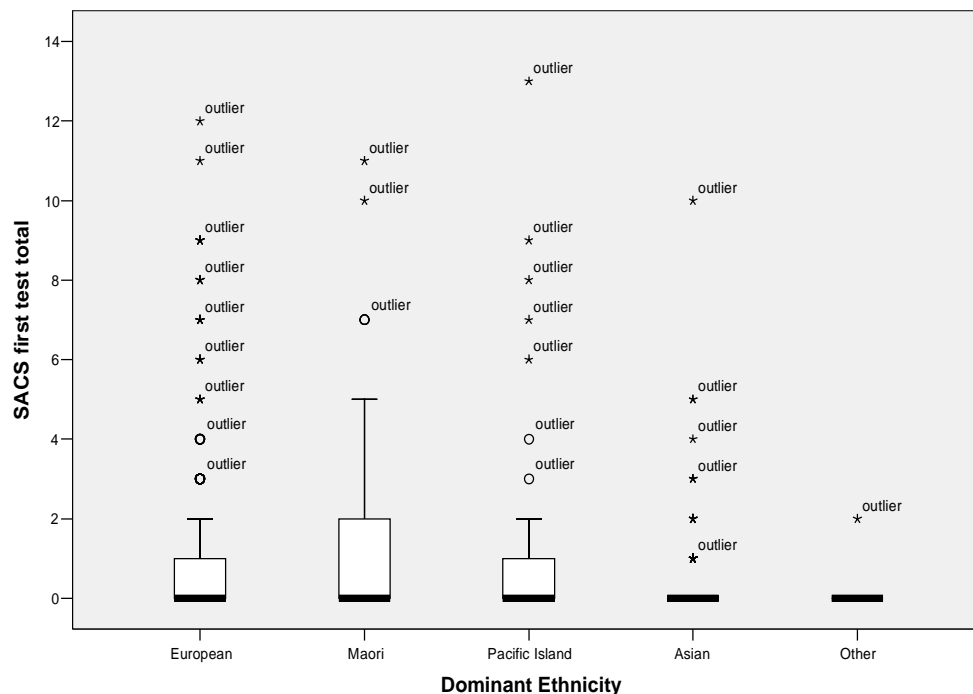
5.5 Performance of the SACS across ethnicities

The distribution of responses for the most common ethnic groups is taken from the community sample and shown in below.

Table 9: SACS first test total scores by ethnicity

	Ethnicity					
SACS difficulties score	European	Maori	Pacific Island	Asian	Other	Total
Mean	1.2	1.6	1.1	0.4	0.2	1.0
Score	frequency (%)					
0	150 (62.5)	28 (56.0)	41 (63.1)	124 (84.4)	11 (91.7)	354 (68.9)
1	31 (12.9)	5 (10.0)	10 (15.4)	12 (8.2)	0	58 (11.3)
2	17 (7.1)	5 (10.0)	7 (10.8)	4 (2.7)	1 (8.3)	34 (6.6)
3	14 (5.8)	3 (6.0)	1 (1.5)	3 (2)	0	21 (4.1)
4	8 (3.3)	3 (6.0)	1 (1.5)	1 (.7)	0	13 (2.5)
5	4 (1.7)	1 (2.0)	0	2 (1.4)	0	7 (1.4)
6	3 (1.3)	0	1 (1.5)	0	0	4 (.8)
7	4 (1.7)	3 (6.0)	1 (1.5)	0	0	8 (1.6)
8	3 (1.3)	0	1 (1.5)	0	0	4 (.8)
9	4 (1.7)	0	1 (1.5)	0	0	5 (1.0)
10	0	1 (2.0)	0	1 (.7)	0	2 (.4)
11	1 (.4)	1 (2.0)	0	0	0	2 (.4)
12	1 (.4)	0	0	0	0	1 (.2)
13	0	0	1 (1.5)	0	0	1 (.2)
Total	240	50	65	147	12	514

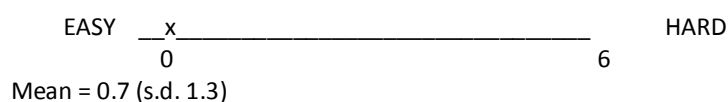
Figure 3. SACS difficulties scores in community population by ethnicity



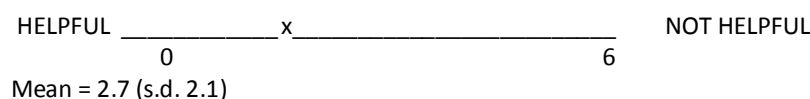
6.0 Acceptability of the Instrument

In assessing the acceptability of the instrument, participants were asked to rate the SACS instrument in terms of how *'easy'*, *'helpful'* and *'upsetting'* it was to complete. This was done via a visual analogue scale (see below) with responses scored between 0 – 6 depending on where participants marked the line on the scale provided. A total of 631 responses to this question were received. The results are detailed below.

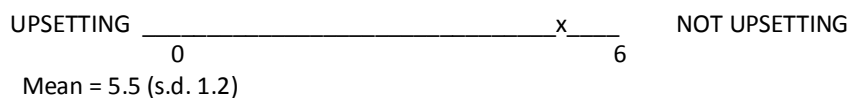
a) I found the SACS questionnaire to be



b) I found the SACS questionnaire to be



c) I found that the SACS questionnaire was



Participants were asked to comment on what they liked about the SACS instrument. Key issues identified by participants included how easy it was to understand and complete the questions, the opportunity it provided for them to consider their own (drug-taking) behaviour, the confidential nature of the tool and the fact that such an instrument would prove beneficial to young people generally. A relatively small number of negative comments were received, with the majority of participants indicating *'nothing'*, when asked *'what didn't you like about the questionnaire?'*.

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THE SUBSTANCES AND CHOICES SCALE

The SACS is only to be used by health professionals working with young people who are engaged in a treatment agency.

The questions in part A) and B) are about your use of alcohol and drugs over the last month.

This does not include tobacco or prescribed medicines.

Please answer every question as best you can, even if you are not certain. Tick only one box on each row.

A) On how many times did you use each of the following <u>in the last month?</u>	Never	Once a week or less	More than once a week	Most days or more
1. Alcoholic drinks (e.g. beer, wine, spirits etc.)
2. Cannabis (e.g. weed, marijuana, pot, skunk etc.)
3. Cocaine (e.g. coke, crack, blow etc.)
4. Amphetamines (e.g. speed, 'P', ice, whiz, goee etc.)
5. Ecstasy and other party drugs (e.g. 'E', GHB etc.)
6. Inhalants (e.g. nitrous, glue, petrol, solvents, paint etc.)
7. Sedatives (e.g. sleeping pills, benzos, downers, valium)
8. Hallucinogens (e.g. LSD, acid, mushrooms, ketamine etc)
9. Opiates (e.g. heroin, morphine, methadone, codeine etc.)
10. BZP (e.g. 'herbal highs', energy pills etc.)
11. Other drug. Name.....
12. Other drug. Name.....

B) Mark <u>one</u> box (on each row), on the basis of how things have been for you <u>over the last month.</u>	Not True	Somewhat True	Certainly True
1. I took alcohol or drugs when I was alone.
2. I've thought I might be hooked or addicted to alcohol or drugs.
3. Most of my free time has been spent getting hold of, taking, or recovering from alcohol or drugs.
4. I've wanted to cut down on the amount of alcohol and drugs that I am using.
5. My alcohol and drug use has stopped me getting important things done.
6. My alcohol or drug use has led to arguments with the people I live with (family, flatmates or caregivers etc.).
7. I've had unsafe sex or an unwanted sexual experience when taking alcohol or drugs.
8. My performance or attendance at school (or at work) has been affected by my alcohol or drug use.
9. I did things that could have got me into serious trouble (stealing, vandalism, violence etc) when using alcohol or drugs.
10. I've driven a car while under the influence of alcohol or drugs (or have been driven by someone under the influence).

C) Finally, how often have you used tobacco (e.g. cigarettes, cigars) <u>over the last month?</u>	Never	SACS difficulties scale		
		Once a week or less	More than once a week	Most days or more

USING AND INTERPRETING THE SUBSTANCES AND CHOICES SCALE

- a clinician guide -

The Substances and Choices Scale (SACS) is a self-report instrument for assessing and monitoring the pattern of use and impact of alcohol and drugs in young people. It is useful as a screening instrument to identify problem areas that warrant further in depth assessment. As it measures behaviour over the last month, it can also be used on a frequent basis to assess progress during treatment and measure outcome at discharge. Young people and their clinicians enjoy completing the SACS as it helps with planning goals and reviewing progress.

The SACS is only to be used by health professionals working with young people who are engaged in a treatment agency.

WHEN SHOULD YOU USE THE SACS?

ASSESSMENT - Young people will begin to make changes to their substance use from the beginning of the assessment and treatment process. Because of this, aim to complete the 1st SACS during the assessment, preferably in the first session.

DURING TREATMENT - Try to repeat the SACS after 4 weeks and then every 3 months (or more frequently if you wish). Improvement or otherwise can be readily tracked over time and used to reflect on the past and future. The SACS can be used as a motivational tool to assist young people to plan towards goals.

AT DISCHARGE – With a planned discharge, completion of a SACS is a nice way to round off a treatment episode. Try sending a SACS out in the post with a stamped addressed envelope if you don't manage to get one completed at the final appointment.

Don't use the SACS if the client is intoxicated, very distressed, or has active symptoms of severe mental illness.

SCORING THE SACS

Section A: SACS use scores – These are interpreted individually as a means to track occasions of use. If your client finds it useful to ascribe numbers to these scores then...

Never = 0, Once a week or less = 1, More than once a week = 2, Most days or more = 3.
However as there is no SACS use total score, this is not always necessary.

Section B: SACS difficulties score – To obtain a total score for the SACS difficulties score;
Not true = 0, Somewhat true = 1, Definitely true = 2.

If there is one incorrectly completed item (question) score that item as 0. Add the scores up as usual. Two incorrectly completed items invalidate the SACS difficulties score.

Section C: SACS tobacco score – Is scored in the same way as Section A.

INTERPRETING THE SACS SCORES

- *The SACS is a screening instrument. It does not yield diagnoses and is a guide only. A high score should prompt the clinician to review the individual items on the SACS and is likely to indicate a need for further assessment in these areas.*
- *A low score does not rule out problems. Young people commonly under-report their substance use and may not answer the SACS honestly.*
- *Comparing SACS scores completed at different times can assist with treatment planning and help with providing feedback but may not necessarily reflect actual progress or otherwise.*

Sections A & C – This scale has not been validated but it is a useful guide of use over the last month. The frequency of use for each substance can be tracked over time. Remember this is a record of the number of occasions of use but not of how much is used on each occasion. This question should lead to further discussion about amounts and patterns of use (such as bingeing).

Section B – This scale has been validated. As such it is a reasonably reliable and valid indication of a young persons current substance use issues. Remember to refer back to the actual items on the questionnaire.

- Scores 2 and above usually indicate the need for further enquiry and/or assessment and/or intervention.
- Scores 4 and above usually signify problems that are clinically significant and require intervention.
- Scores 6 and above are usually indicative of serious problems requiring a specialist substance use service.

The SACS is only to be used by health professionals working with young people who are engaged in a treatment agency.