



# Web-based Cognitive Behavioral Self-help Therapy versus Psycho-educative Information to Reduce Cocaine Consumption in Problematic Cocaine Users: A Randomized Controlled Trial

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# SWITZERLAND & EUROPE



Switzerland: **No prevalence data available** for problematic cocaine consumption or cocaine addiction.

Europe: It is estimated that around 13 million Europeans have used cocaine at least once in their lifetime, on average **3.9% of adults aged 15-64 years** (EMCDDA 2009).

## Assumptions:

- Most cocaine users are well integrated in society and can not be reached through conventional therapy services or health promotion programs.
- For some cocaine users it might be an advantage to learn to control cocaine consumption or to abstain from cocaine before they get into heavier consequences (social, partnership problems, etc.).
- Online CBT interventions combined with self-help principles might also be effective in the treatment of problematic cocaine use



Internet-based self-help therapy interventions  
by problematic use of

# Alcohol, tobacco, cannabis



## **Alcohol:**

Meta-analysis shows that personalized feedback is effective (e.g. Riper et al. 2008).  
Moderate effects when combined with principles of self control and weekly chat sessions over 3 months (Blankers et al. 2011).

## **Tobacco:**

Emerging evidence from RCTs that online smoking cessation treatment is effective when compared to minimal interventions or waiting list (Haug and Schaub, 2011).

## **Cannabis:**

Only two studies that investigated web-based self-help for the reduction of cannabis use (Rooke et al. 2013, Tossman et al. 2011)



CONTROL

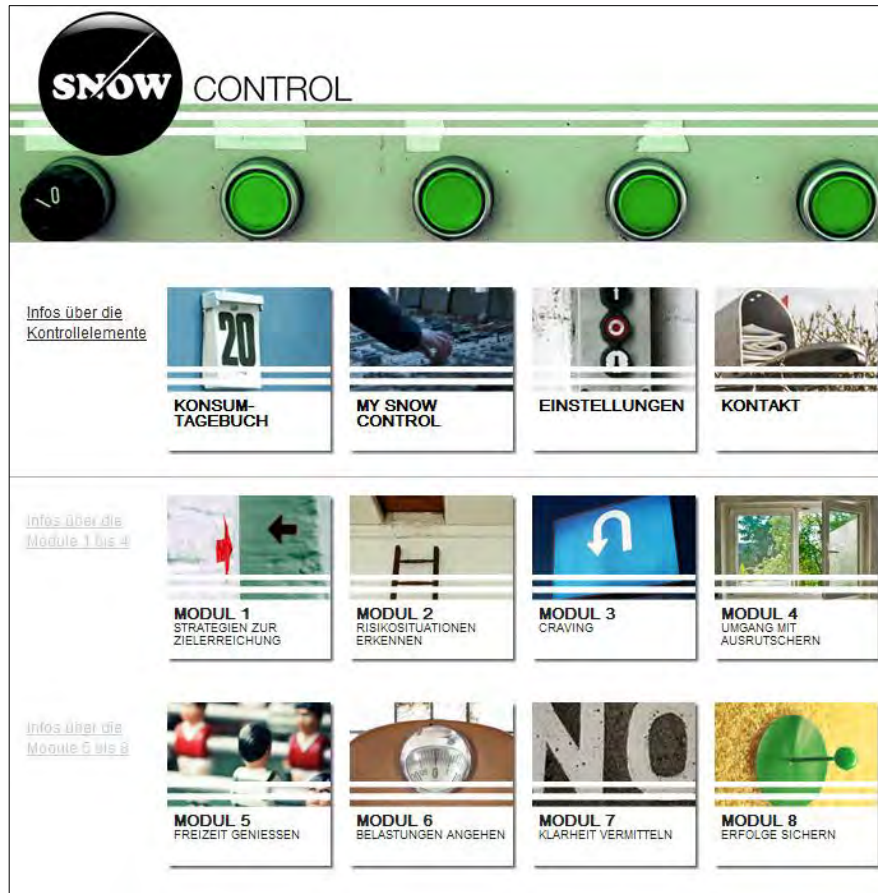




# SUMMARY



- Web-based 6 week intervention for cocaine addiction
- Anonymous participation
- 8 interactive modules to work through
- Based on cognitive behavioral intervention strategies and principles of self-control
- Weekly consumption diary with automated progress charts
- Current language: German



## Key Modules

- (1) Strategies for goal achievement
- (2) Identifying risk situations
- (3) Dealing with cocaine craving
- (4) Dealing with relapses

## Further Modules

- (5) Enjoying leisure time
- (6) Dealing with burdens
- (7) Saying “no” to foster refusal skills
- (8) Preserving achievements

## My Snow Control

## Consumption Diary





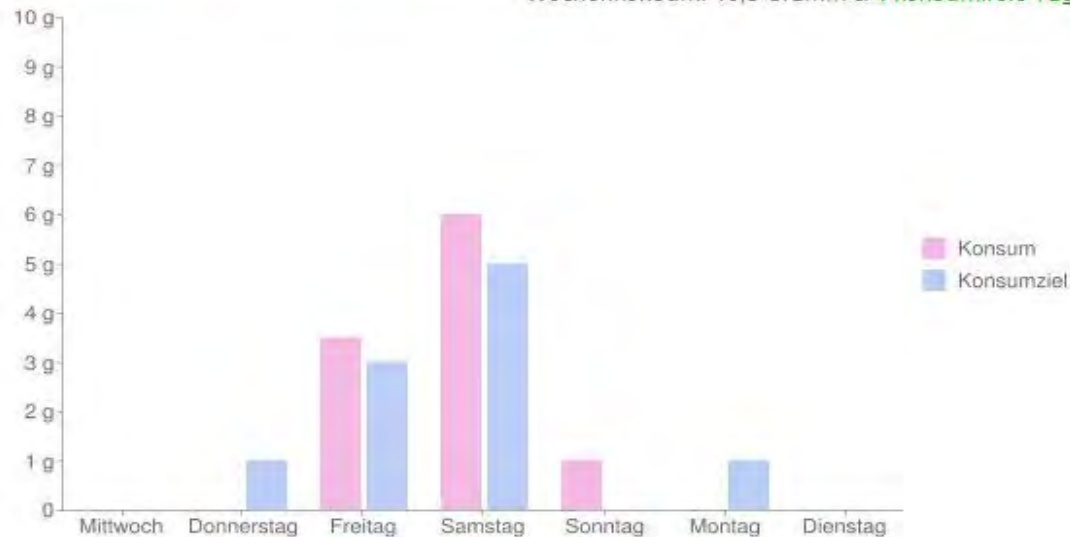
CONTROL



## Konsumtagebuch

Mi, 21. Apr	Do, 22. Apr	Fr, 23. Apr	Sa, 24. Apr	So, 25. Apr	Mo, 26. Apr	Di, 27. Apr
	Konsumziel:	Konsumziel:	Konsumziel:	Konsumziel:	Konsumziel:	Konsumziel:
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Konsum:	Konsum:	Konsum:	Konsum:	Konsum:	Konsum:	Konsum:
0 g	0 g	3,5 g	6 g	1 g	0 g	0 g

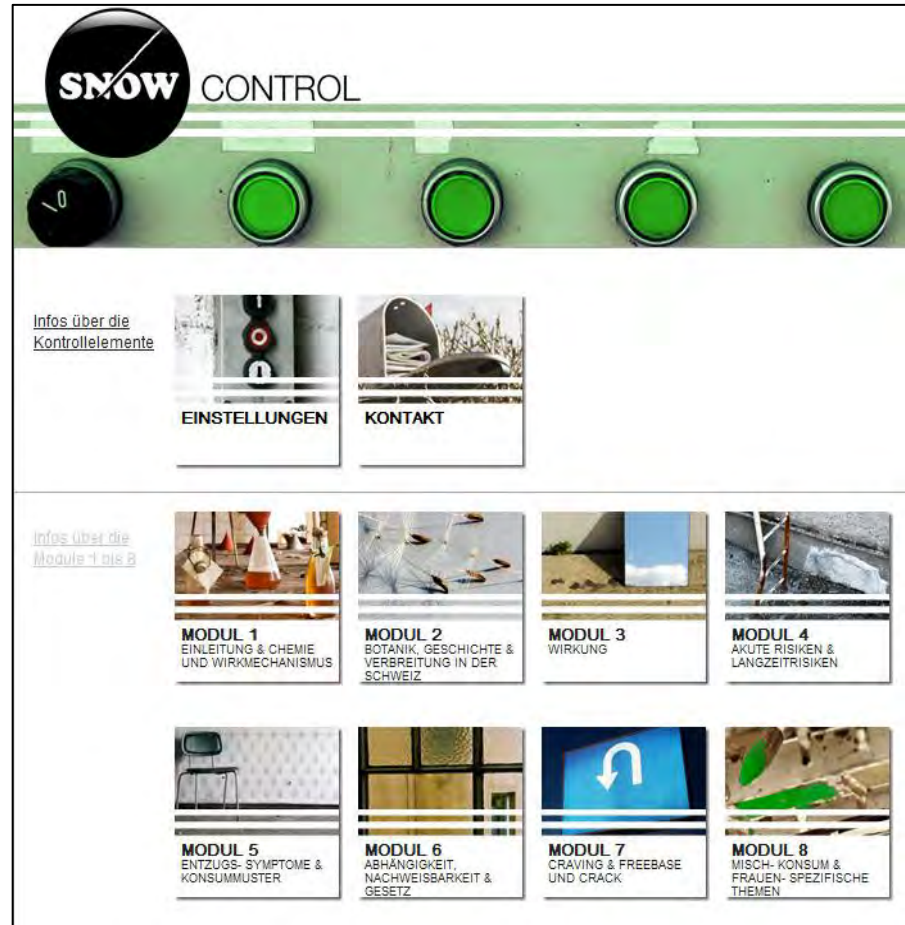
Wochenkonsum: 10,5 Gramm & 4 konsumfreie Tage – [Grafik](#)



## Modules

- (1) Introduction, mechanism of action
- (2) History of cocaine, prevalence rates
- (3) Effects of cocaine
- (4) (Long-term) risks
- (5) Withdrawal symptoms
- (6) Addiction, law & legal issues
- (7) Craving, freebase & crack
- (8) Poly drug use, women-specific topics

## Quiz



**SNOW CONTROL**

[Infos über die Kontrollelemente](#)

**EINSTELLUNGEN**

**KONTAKT**

[Infos über die Module 1 bis 8](#)

**MODUL 1**  
EINLEITUNG & CHEMIE UND WIRKMECHANISMUS

**MODUL 2**  
BOTANIK, GESCHICHTE & VERBREITUNG IN DER SCHWEIZ

**MODUL 3**  
WIRKUNG

**MODUL 4**  
AKUTE RISIKEN & LANGZEITRISIKEN

**MODUL 5**  
ENTZUGS- SYMPTOME & KONSUMMUSTER

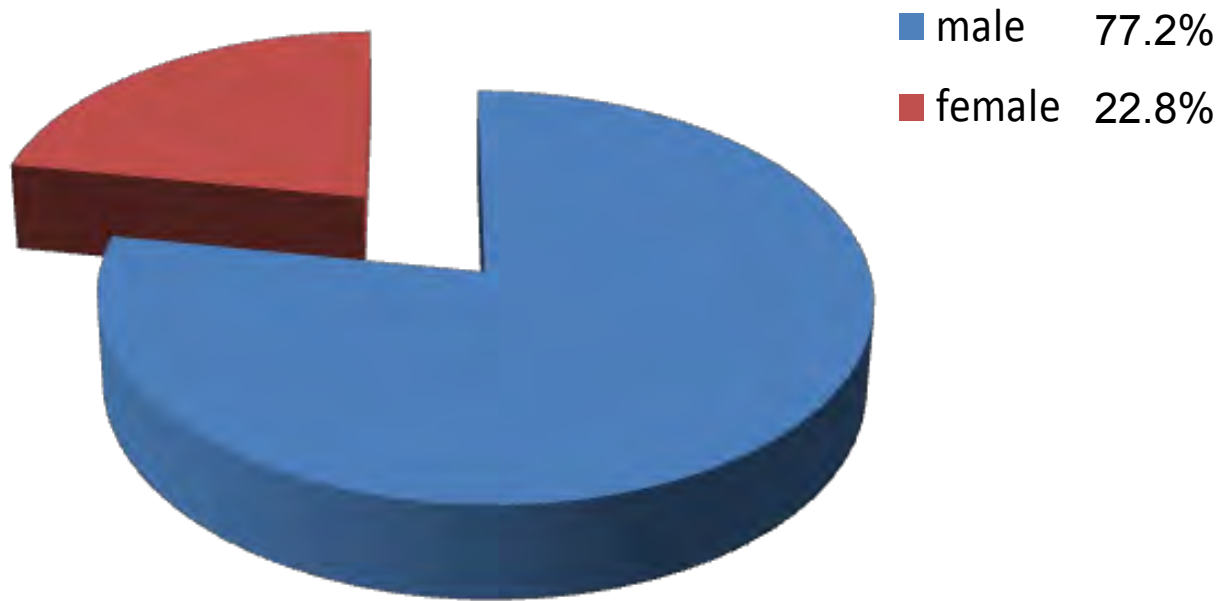
**MODUL 6**  
ABHÄNGIGKEIT, NACHWEISBARKEIT & GESETZ

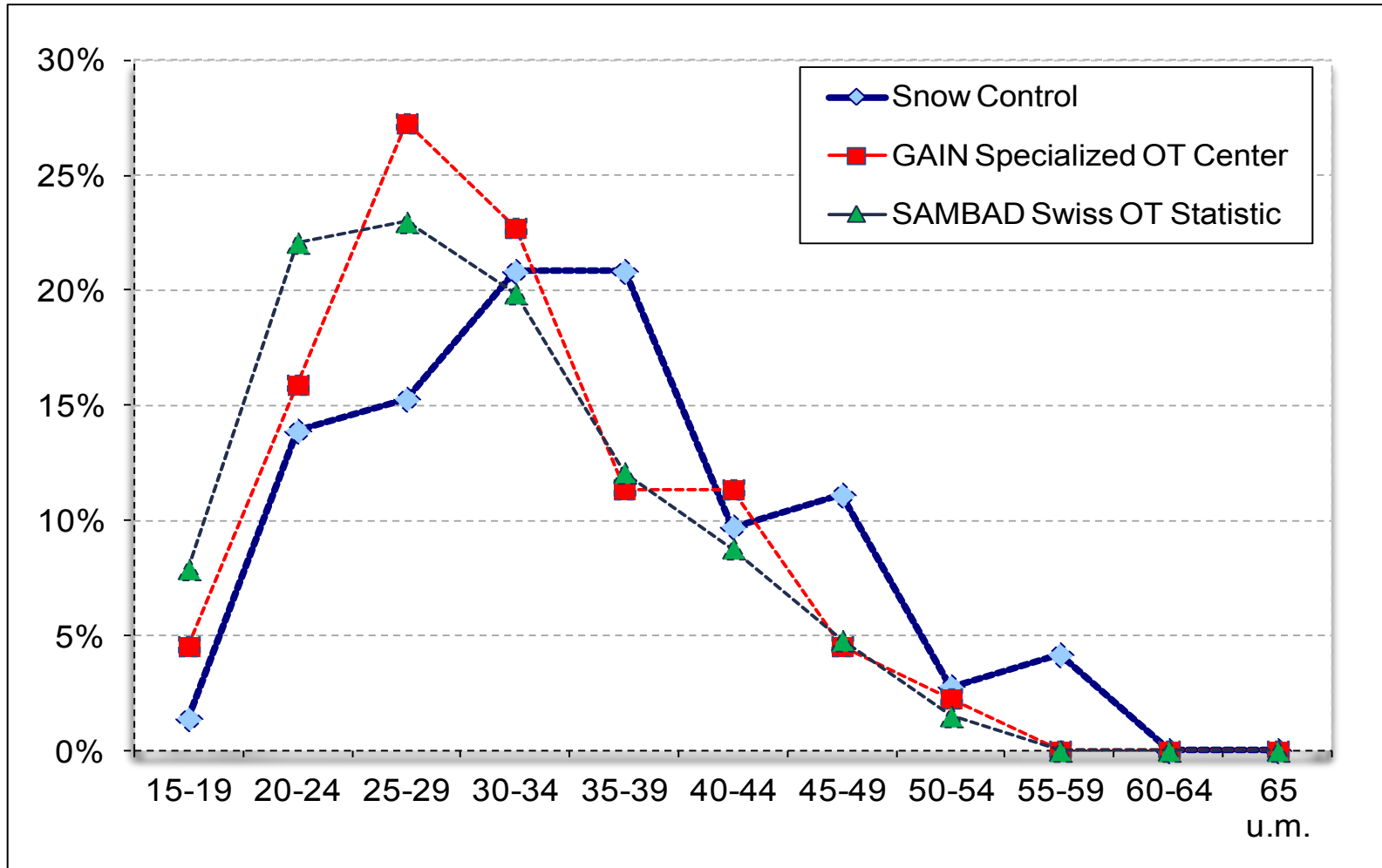
**MODUL 7**  
CRAVING & FREEBASE UND CRACK

**MODUL 8**  
MISCH- KONSUM & FRAUEN- SPEZIFISCHE THEMEN



# Snow Control user profiles

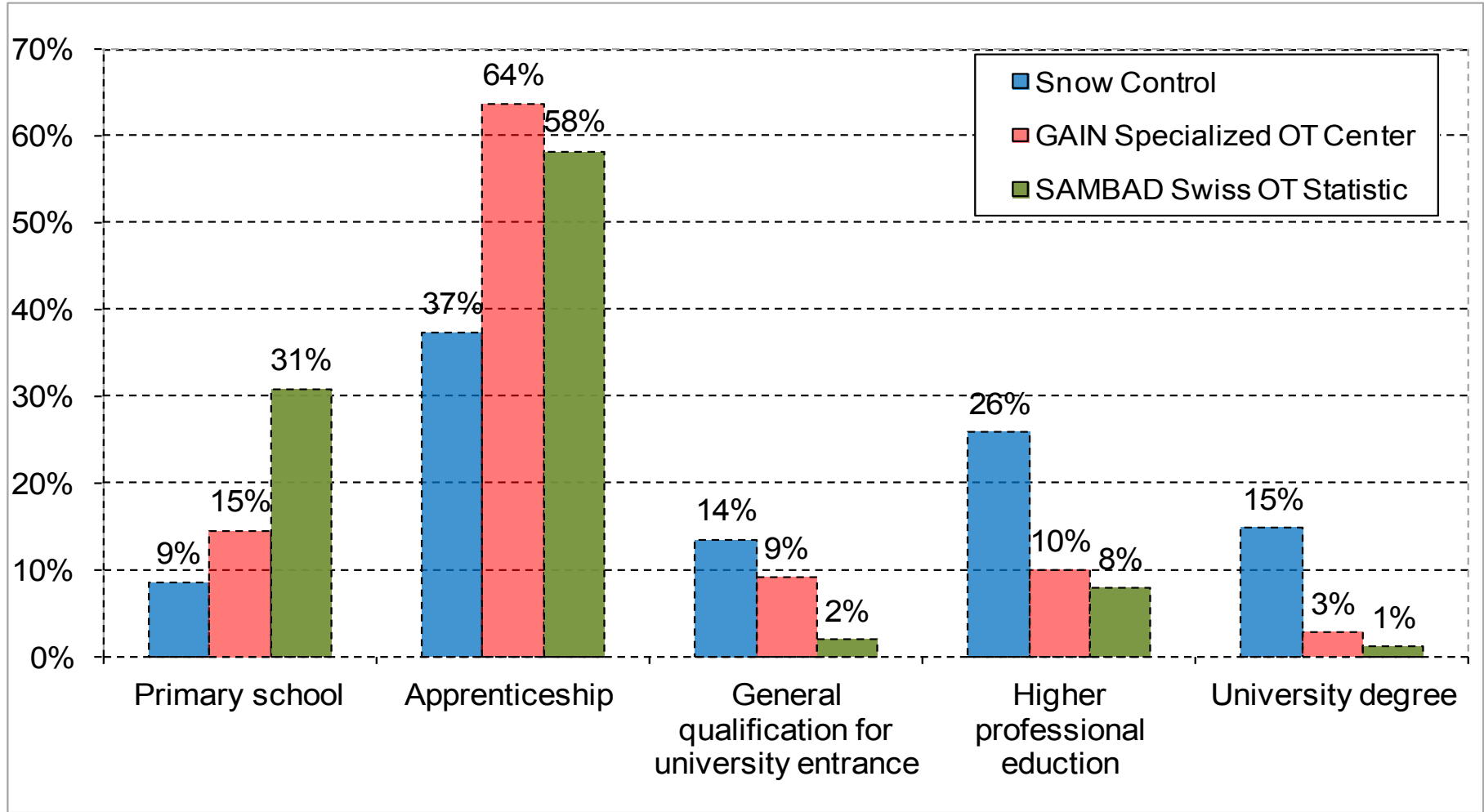




$\chi^2 = 3.324, df = 1, P = .001, w = 0.132$

# Socio-demographic Characteristics

## Highest educational achievement (%)



$\chi^2 = 6.614$ ,  $df = 1$ ,  $P = .001$ ,  $w = 0.196$



# Methods

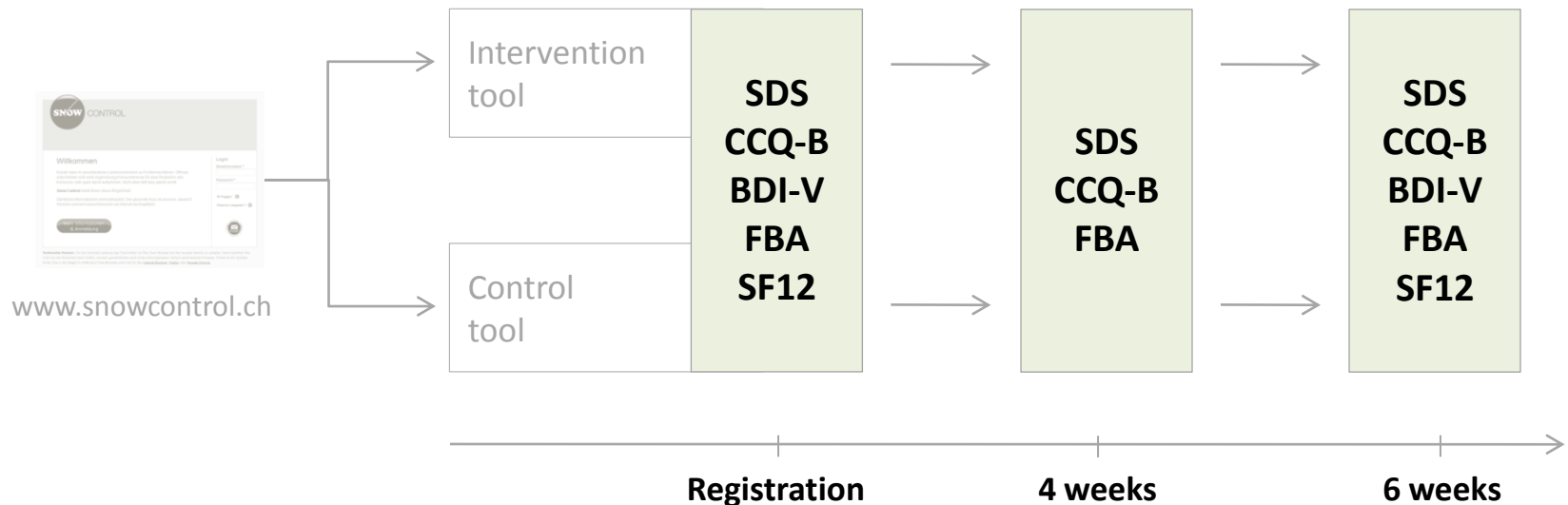
**SDS** Severity of Dependence Scale (primary outcome together with cocaine use according to consumption diary)

**CCQ-B** Cocaine Craving Questionnaire Brief

**BDI-V** Beck Depression Inventory (short version)

**FBA** “Substance Use Anamnesis” from EuropASI

**SF12** SF12 Health Survey





## ***Inclusion Criteria***

- Minimal age of 18 years
- Cocaine use > 2 occasions in the last 30 days

## ***Exclusion Criteria***

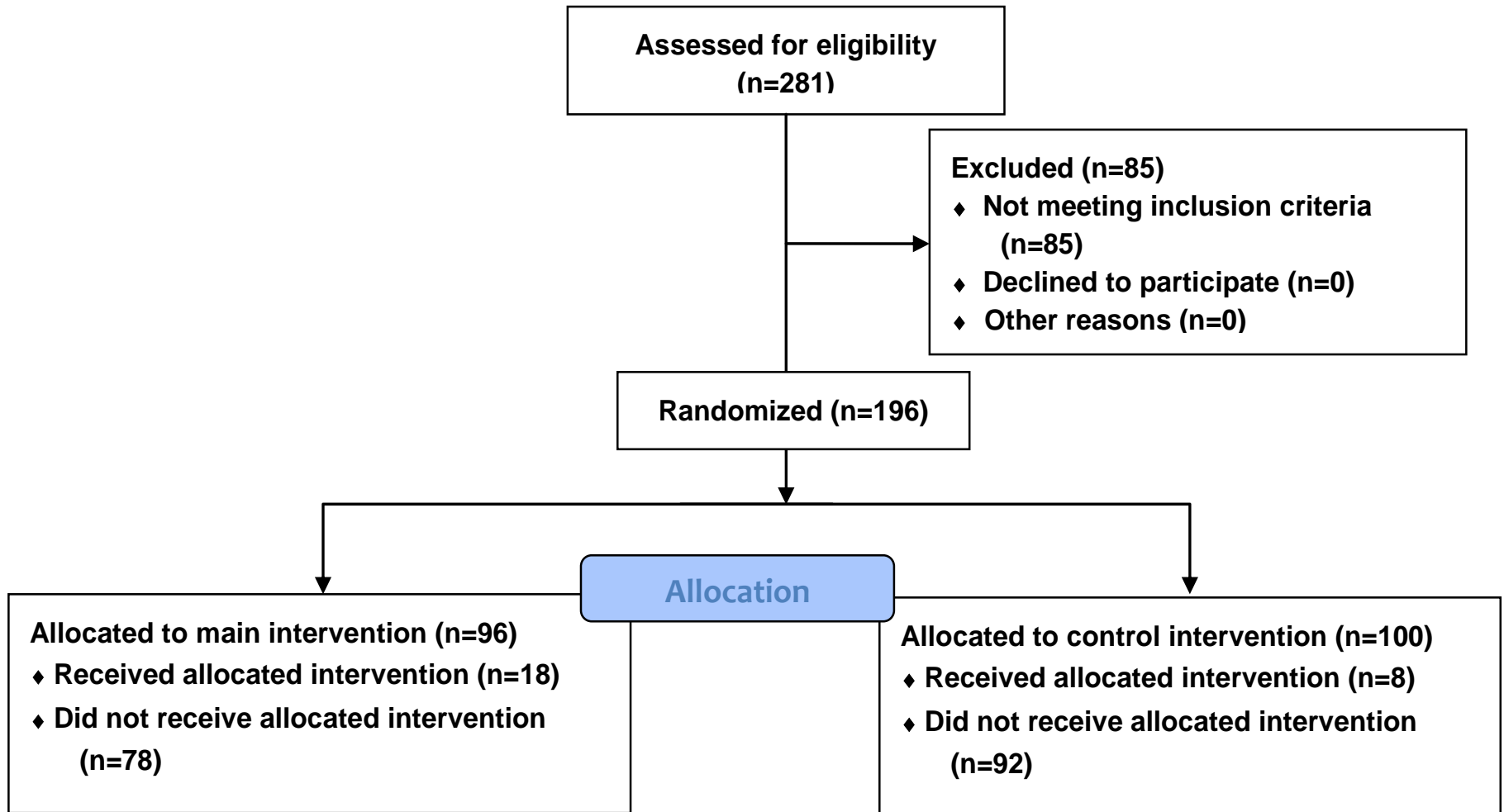
- Participation in other psycho-social or pharmacological treatments for the reduction/cessation of cocaine use
- Street opioid use in the last 30 days
- Ever been in treatment for cardiovascular problems or apoplexy

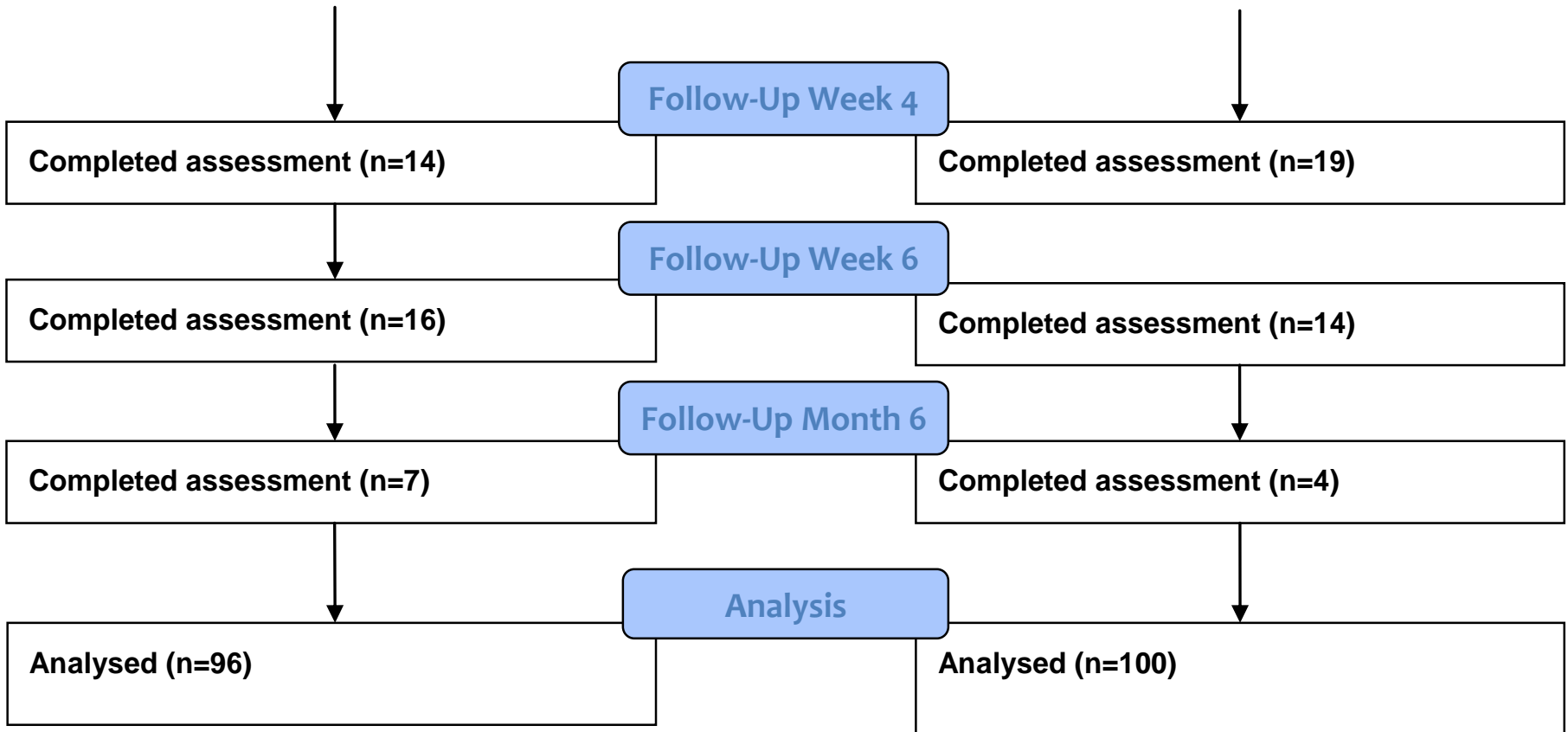
- Intention to treat design
- Baseline comparisons with basic SPSS statistics
- Imputation of missing data (STATA)
- Linear and Logistic Generalized Estimation Equation (GEE) models for analyses of primary and secondary outcomes
- Stepwise linear regression modeling for baseline retention predictors

More details:

Current Controlled Trials: NTR-ISRCTN93702927

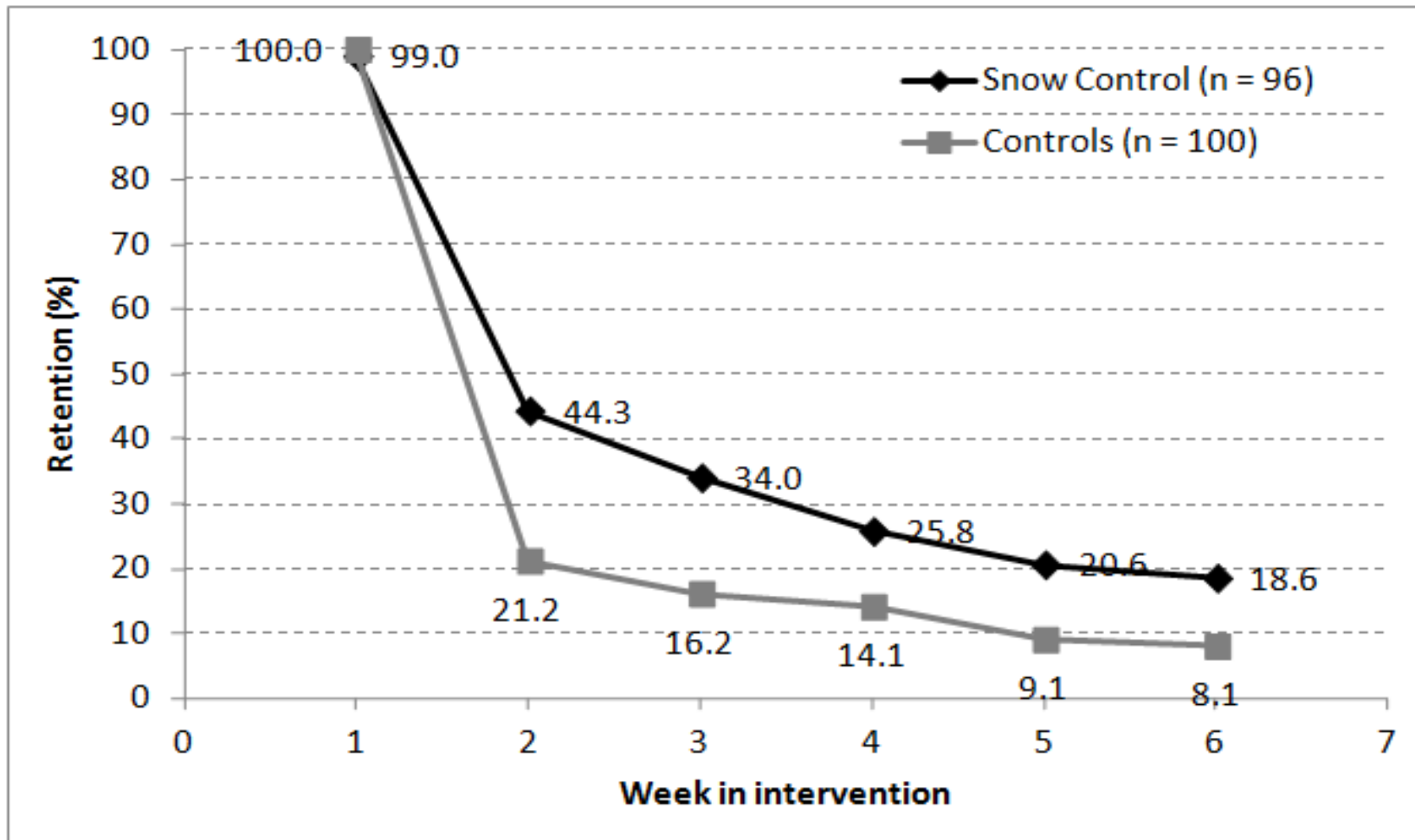
Schaub M., Sullivan R., Stark L. Snow control - an RCT protocol for a web-based self-help therapy to reduce cocaine consumption in problematic cocaine users. *BMC Psychiatry* 2011; 11: 153.







# RCT results



$\chi^2 = 2.054, df = 1, P = .040, w = 0.220$



# Final Baseline Predictor Model for Retention



	<i>OR</i>	<i>95% CI</i>	<i>P</i>
Condition	2.65	1.04-6.77	.042
Age (range 18-56)	1.05	1.01-1.10	.047
Severity of dependence (SDS, range 1-10)	0.76	0.64-0.92	.004
Depressive symptoms (BDI-V, range 20-91)	1.06	1.02-1.11	.005

*Note:* Condition 0 = control group, 1 = intervention group



# Results of logistic Generalized Estimation Equation (GEE) models



Binary outcome variables <sup>a</sup>	OR (95% CI) <sup>b</sup>	Standard error	t test	P
Cannabis consumption within previous month (df = 9.4)				
Study group (control vs intervention)	0.73 (0.30 - 1.79)	0.33	-0.69	.49
Time	1.92 (1.32 - 2.79)	0.32	3.93	.003
Study group × time	1.03 (0.72 - 1.47)	0.18	0.18	.86
Cocaine consumption within previous month (df = 4.0)				
Study group (control vs intervention)	0.78 (0.17 - 3.55)	0.22	-0.07	.95
Time	0.42 (0.07 - 2.50)	0.45	-0.58	.59
Study group × time	1.08 (0.70 - 1.67)	0.24	0.36	.72
Alcohol consumption within previous month (df = 10.0)				
Study group (control vs intervention)	0.95 (0.42 - 2.15)	0.39	-0.13	.89
Time	1.42 (1.06 - 1.90)	0.19	2.61	.02
Study group × time	1.01 (0.74 - 1.37)	0.15	0.07	.95
Binge drinking within previous month (df = 5.0)				
Study group (control vs intervention)	1.13 (0.45 - 2.84)	0.52	0.28	.78
Time	1.57 (0.77 - 3.21)	0.44	1.64	.16
Study group × time	0.94 (0.66 - 1.34)	0.16	-0.35	.73



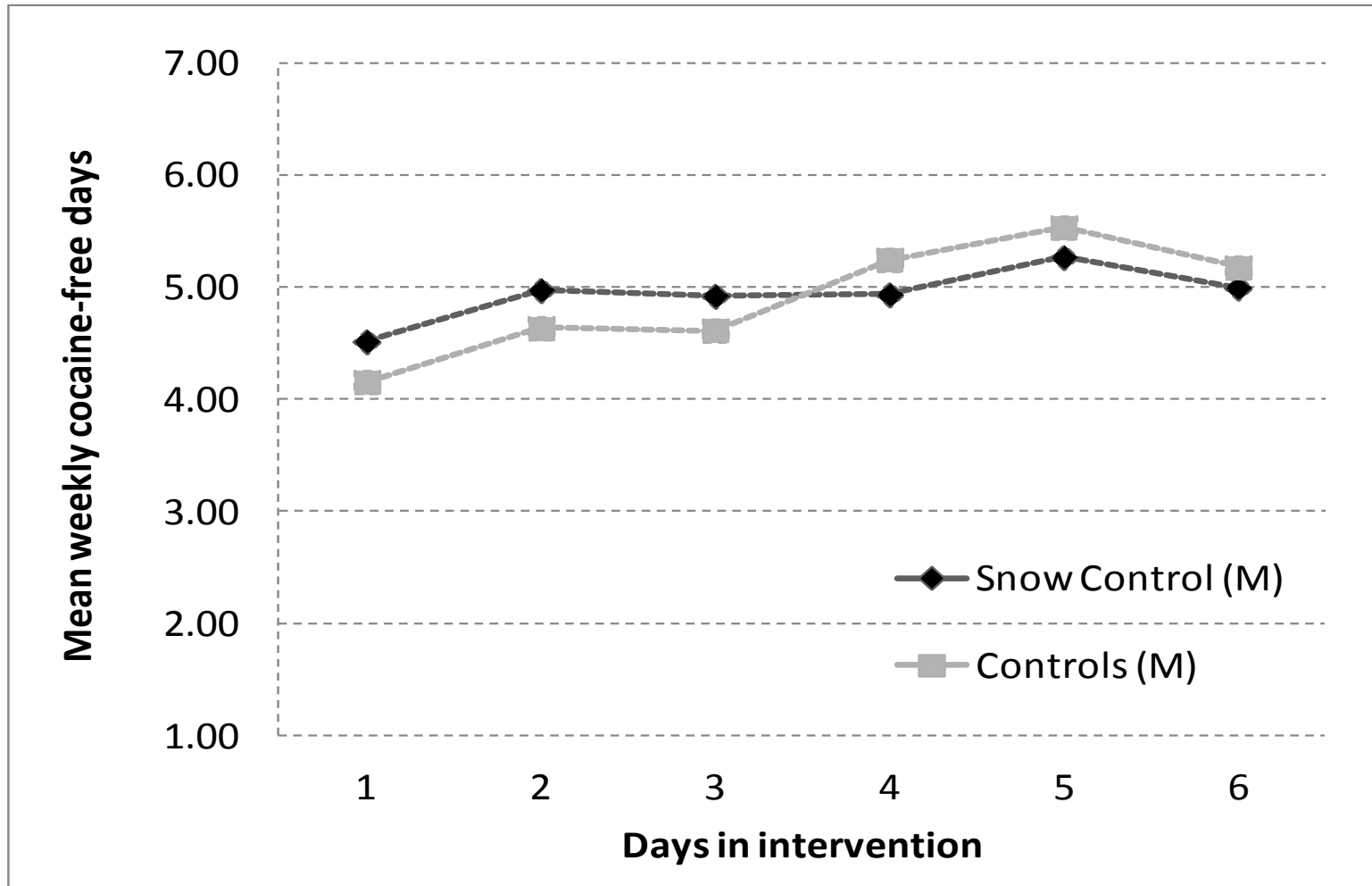


# Results of linear Generalized Estimation Equation (GEE) models



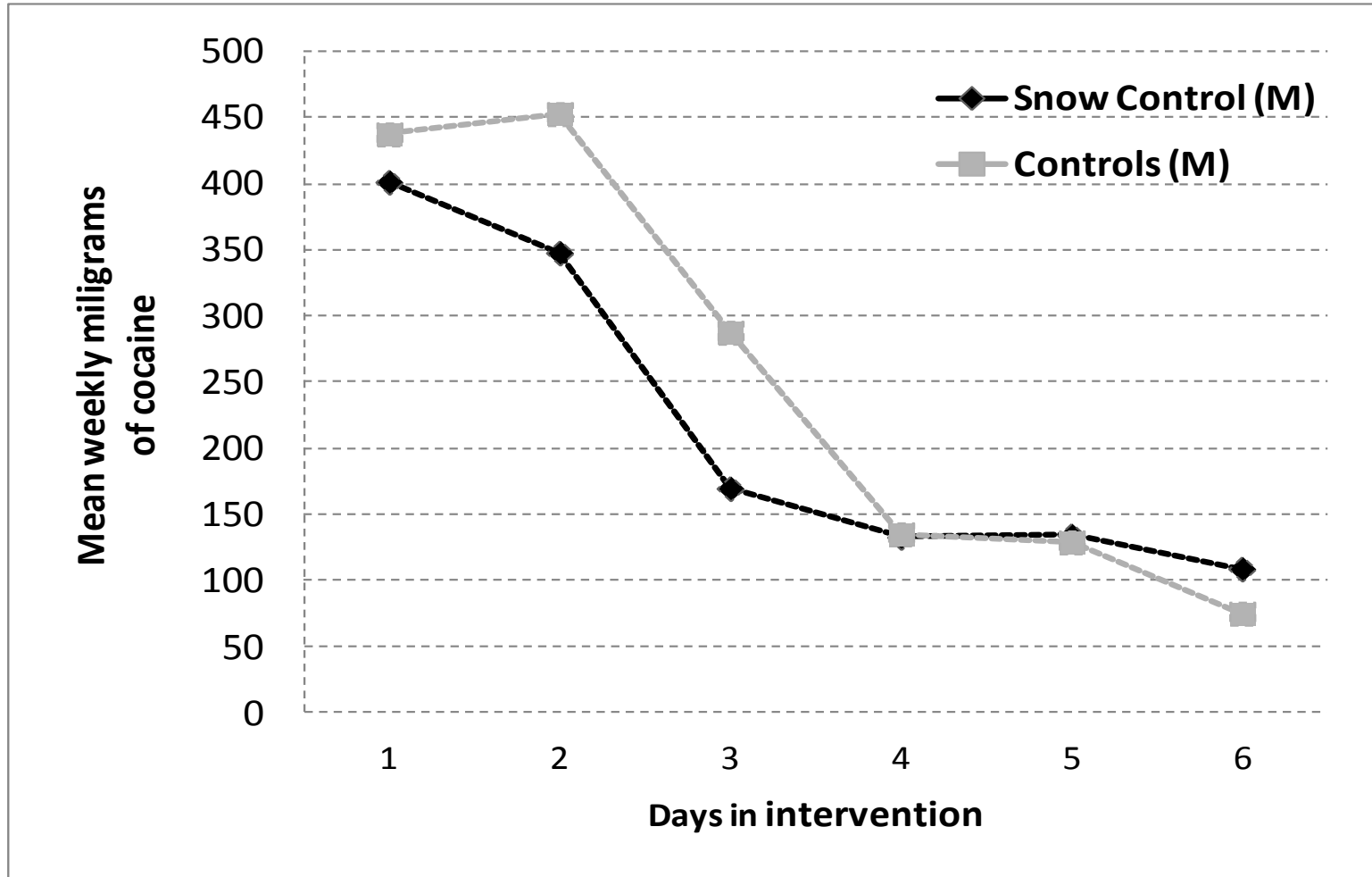
Continuous outcome variables	Beta	Standard error	t test	P
<b>Severity of Dependence Scale (SDS)<sup>a</sup> (df = 8.4)</b>				
Study group (control vs intervention)	-0.36	0.74	-0.49	.63
Time	-1.45	0.23	-6.25	.000
Study group × time	0.07	0.22	0.33	.75
<b>Cocaine Craving Questionnaire-Brief (CCQ-Brief)<sup>a</sup> (df = 7.3)</b>				
Study group (control vs intervention)	0.67	1.92	0.35	.73
Time	1.07	0.78	1.37	.21
Study group × time	0.07	0.60	0.12	.90
<b>Beck Depression Inventory (BDI)<sup>b</sup> (df = 6.5)</b>				
Study group (control vs intervention)	-2.86	2.69	-1.06	.29
Time	-4.45	1.09	-4.08	.006
Study group × time	0.43	0.76	0.57	.57

# Mean weekly cocaine free days (Consumption Diary, all cases)



Week 4:  $T = 2.225$ ,  $df = 46$ ,  $P = 0.310$ ,  $d = 0.758$ ; week 6:  $T = 0.841$ ,  $df = 30$ ,  $P = 0.940$ ,  $d = 0.079$

# Mean mg cocaine / week (Consumption Diary, all cases)



Week 4:  $T = 0.077$ ,  $df = 37$ ,  $P = 0.940$ ,  $d = 0.010$ ; week 6:  $T = 0.544$ ,  $df = 24$ ,  $P = 0.591$ ,  $d = 0.245$



# Conclusions

1. Snow Control reached its target group, was feasible and safe
2. Snow Control is able to keep more cocaine users in online self-help intervention
3. Snow Control is not more effective in the reduction of cocaine use
4. Many users do not aim at reducing the frequency of cocaine use days but at the reduction of the quantity of cocaine (moderation of use)
5. Snow Control 2.0 is on the way...
6. And so is Cannabis Control (ISRCTN59948178)

#### More details:

Schaub M, Sullivan R, Haug S, Stark L. Web-based cognitive behavioral self-help intervention to reduce cocaine consumption in problematic cocaine users: randomized controlled trial. *J Med Internet Res*. 2012 Nov 28;14(6):e166.



## Questions?

# Thank you for your attention.

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