



# The effectiveness of the "Unplugged" program in Nigeria: study design and results

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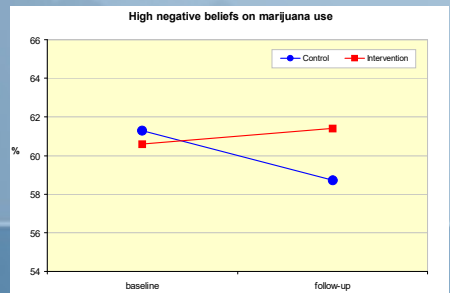
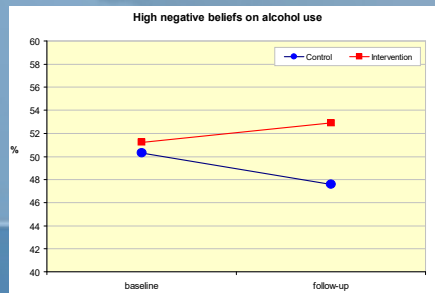
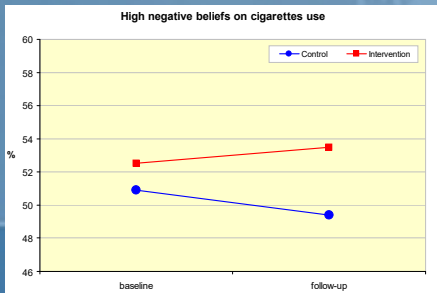


## Background

In 2015, the UNODC with the collaboration of the Federal Ministry of Education, the National Drug Law Enforcement Agency and the National Agency for Food and Drug Administration, implemented in Nigeria a large-scale project funded by the EU to promote healthy lifestyles in schools, families and communities. Within the project, the effectiveness of the school-based prevention program "Unplugged" was evaluated through a cluster RCT with two arms: the experimental group and the Usual Curriculum control group.

## Methods

The study involved federal schools of the entire territory of Nigeria. Assuming alpha 0.05, power 0.80, prevalence of use in the control arm 14.6% and in the intervention arm 10.2%, 45 pupils per class, ICC 0.025, the estimated sample size needed was 1943 pupils per group. This corresponded to 14 schools per arm. To overcome possible drop-outs, the number of schools to be randomized was enlarged to 16 per arm. The randomization took place by zone. The number of schools to be randomized in each zone was decided based on the population size of the zones. Extraction and randomization of the schools were performed at the central level, in OED Institute in Torino, Italy. All the 32 schools and 96 classes participated both in the baseline and in the follow-up survey. A self-completed anonymous questionnaire was created ad hoc for the surveys. To preserve confidentiality, the questionnaires were labelled with a 9-digit individual code self-generated by the student.



## Results

Unplugged was effective in reducing the prevalence of sporadic, regular and daily alcohol use, and of marijuana use among younger pupils; in improving negative beliefs on tobacco and alcohol; in improving class climate; and in reducing the erroneous perception of peers' prevalence of cigarettes, alcohol and marijuana use, with a stronger effect among younger pupils.

## Conclusions

Unplugged reached in Nigeria good results in preventing alcohol and marijuana use, improving class climate and correcting normative beliefs, similarly to what observed in the European original effectiveness study. Therefore, the implementation of Unplugged on a larger scale in the country can be supported, with the attention of focusing on younger adolescents.

Outcome	Overall AOR* (95% CI)	10-14 years AOR* (95% CI)
Last month cigarette smoking		
at least once	0.84 (0.56-1.27)	0.61 (0.21-1.73)
at least 6 times: regular smoking	0.54 (0.28-1.06)	-
Last month alcohol drinking		
at least once	<b>0.82 (0.69-0.98)</b>	<b>0.71 (0.53-0.94)</b>
at least 6 times: regular drinking	<b>0.74 (0.58-0.94)</b>	<b>0.58 (0.38-0.86)</b>
at least 20 times: daily drinking	<b>0.61 (0.40-0.95)</b>	0.83 (0.38-1.82)
Last month marijuana use		
at least once	0.81 (0.51-1.29)	<b>0.17 (0.03-0.86)</b>
at least 6 times: regular use	0.82 (0.46-1.45)	-
Negative beliefs (high vs middle/low)		
on tobacco	<b>1.17 (1.00-1.38)</b>	1.13 (0.89-1.43)
on alcohol	<b>1.25 (1.07-1.46)</b>	1.25 (0.99-1.59)
on marijuana and drugs	1.15 (0.97-1.35)	1.06 (0.82-1.36)
Class climate (good vs medium/bad)	<b>1.35 (1.13-1.63)</b>	<b>1.49 (1.14-1.96)</b>
Peers' prevalence		
none/less than half smoke cigarettes	<b>1.39 (1.19-1.62)</b>	<b>1.59 (1.25-2.02)</b>
none/less than half drink alcohol	<b>1.34 (1.15-1.56)</b>	<b>1.43 (1.14-1.80)</b>
none/less than half use marijuana or drugs	<b>1.19 (1.03-1.39)</b>	1.19 (0.95-1.50)

\*Multilevel model with zone as first level, adjusted for age, baseline level of the indicator, and zone's baseline prevalence of tobacco, alcohol or marijuana use specific for the indicator.