COMPARISON OF TWO SCHOOL-BASED SMOKING PREVENTION PROGRAMMES AMONG SOUTH AFRICAN SCHOOL STUDENTS: RESULTS OF A RANDOMISED TRIAL

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BACKGROUND

About 20 000 deaths in South Africa are attributable to smoking annually[1] and, like other developing countries, is projected to increase substantially [2-4].

To curb this projection, South Africa has taken steps to develop and implement a sound legislative policy based on evidence and national surveillance systems and recognizes the need for the development of effective tobacco control education programs.

INTRODUCTION

Despite the increase in tobacco use amongst adolescence in resource poor countries there was a noticeable lack of documented literature about controlled intervention studies regarding tobacco prevention in central or southern Africa. Although effective tobacco control requires multilevel, integrated programs and policies, it is recognized that school-based prevention programs are a potentially important component of a comprehensive tobacco and drug use prevention strategy [5-8] .

It is also recognized that such programs, due to the diversity of the determinants of tobacco and other drug use cross-culturally [9,10] ,cannot be generalized to different cultural contexts both within and outside of a country.

AIM OF THE STUDY

The primary aim of the study was to adapt and test two contrasting school-based approaches to adolescent tobacco use prevention.

METHODOLOGY

Sampling Framework

All public schools in two of South Africa's nine provinces, KwaZulu-Natal and the Western Cape, were enumerated.

- 36 Schools were randomly selected from the two provinces and randomly assigned to one of three groups.
- Group 1 (comparison) schools (n=12) received usual tobacco and substance use education.
- Group 2 schools (n=12) received the South African version of the "Keep Left" harm minimization (HM) curriculum.
- Group 3 schools (n=12) received the South African version of the "life skills training" curriculum (LST).
- Both curricula were implemented in grade 8 and continued through to grade 9 after the teachers received a two and half day training each year.

STUDY DESIGN

	Number of Schools	2005 Baseline Start Grade 8		Post 1 End Grade 8		2006 Post 2 End Grade 9
Comparison (Usual Ed)	12	O1		O2		O3
Life Skills Training	12	O1	X1	O2	X2	O3
Harm Minimization	12	O1	X1	O2	X2	O3

O = Observation (questionnaires administered to students)

X1 = LST and HM Curriculum (8 lessons) taught by classroom teachers in grades 8

X2 = LST and HM Curriculum (8 lessons) taught by classroom teachers in grades 9

STUDY INTERVENTION

Both the LST and HM curricula required extensive adaptation to meet with the South African students' and educational systems' needs.

This process was informed through focus group discussions undertaken with teachers and students. It resulted in a comprehensive set of workbooks with 8 units each for the students and the teacher.

OUTCOME MEASURES

The primary outcome measure of the study was any 30-day cigarette use assessed by self-report questionnaire

RESULTS

Sample Description

A total of 5 266 grade eight students completed the baseline survey.

There were 5.685 eligible students and this equates to a 93% student response rate.

Of these 4 684 (89%) completed at least one of the two posttest assessments.

At baseline the three intervention groups did not differ on any of the socio-demographic or substance use variables (Table 1).

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Table 1. Sample Description: Cohort by Intervention Group

	Cohort			
	Control (n=1404)	Harm Minimization (n=1751)	Life Skills (n=1529)	Total (n=4684)
Gender, (% Male)	48.1	55.1	47.5	50.5
Age Mean (std)	14.0 (1.2)	14.1 (1.2)	14.1 (1.2)	14.1 (1.2)
Ethnicity				
% Black	55.7	61.0	61.7	59.7
% " Coloured"	28.6	26.3	24.6	26.4
% White	9.4	9.4	11.1	9.9
Cigarette Use (%)				
Ever	28.6	27.1	30.4	28.6
30-day	16.2	14.2	15.3	15.2
Heavy	4.6	4.7	3.7	4.3
Other Drug Use (%)				
30-day Binge Drinking (5+)	11.8	11.1	12.9	11.9
30-day Marijuana	4.5	5.1	3.8	4.5
30-day "Hard" Drug	3.3	4.2	2.6	3.4

30-DAY SMOKING

Figure 1 depicts the rates of 30-day smoking for the entire sample at baseline, year 1 follow-up and year 2 follow-up for all three groups.

The net change from baseline to 2-year follow-up in the control group was 6% compared to 3% in both HM and LST schools. Figures 2-5 depict the rates of 30-day smoking of gender and race by group at the three time points.

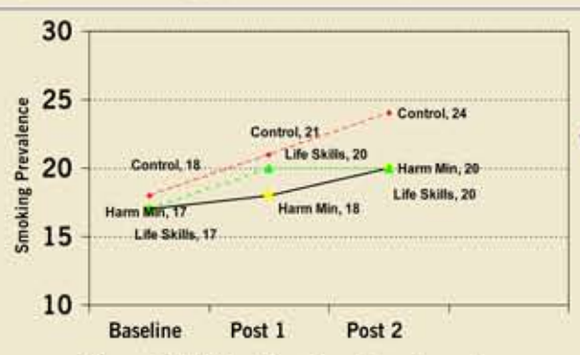


Figure 1. 30-day Smoking Prevalence by Treatment Group

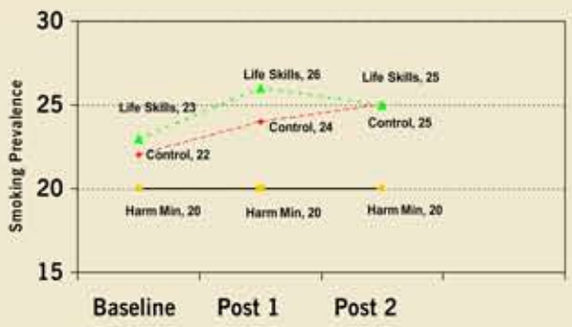


Figure 2. 30-day Smoking Prevalence: Male Learners by Treatment Group

Figure 3. 30-day Smoking Prevalence: Female Learners by Treatment Group

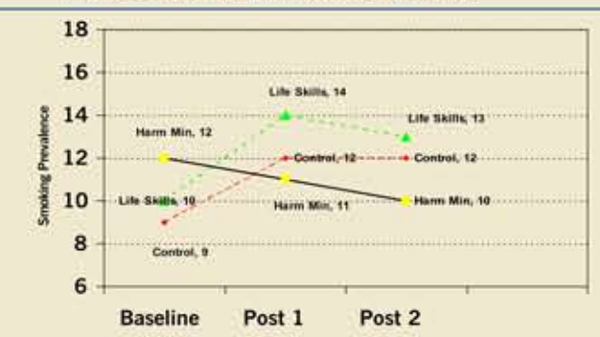


Figure 4. 30-day Smoking Prevalence: Black Learners by Treatment Group

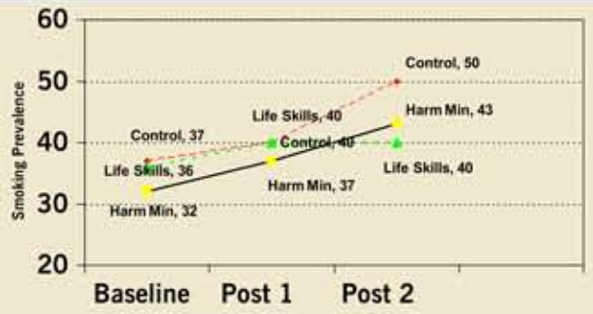


Figure 5. 30-day Smoking Prevalence: "Coloured" Learners by Treatment Group

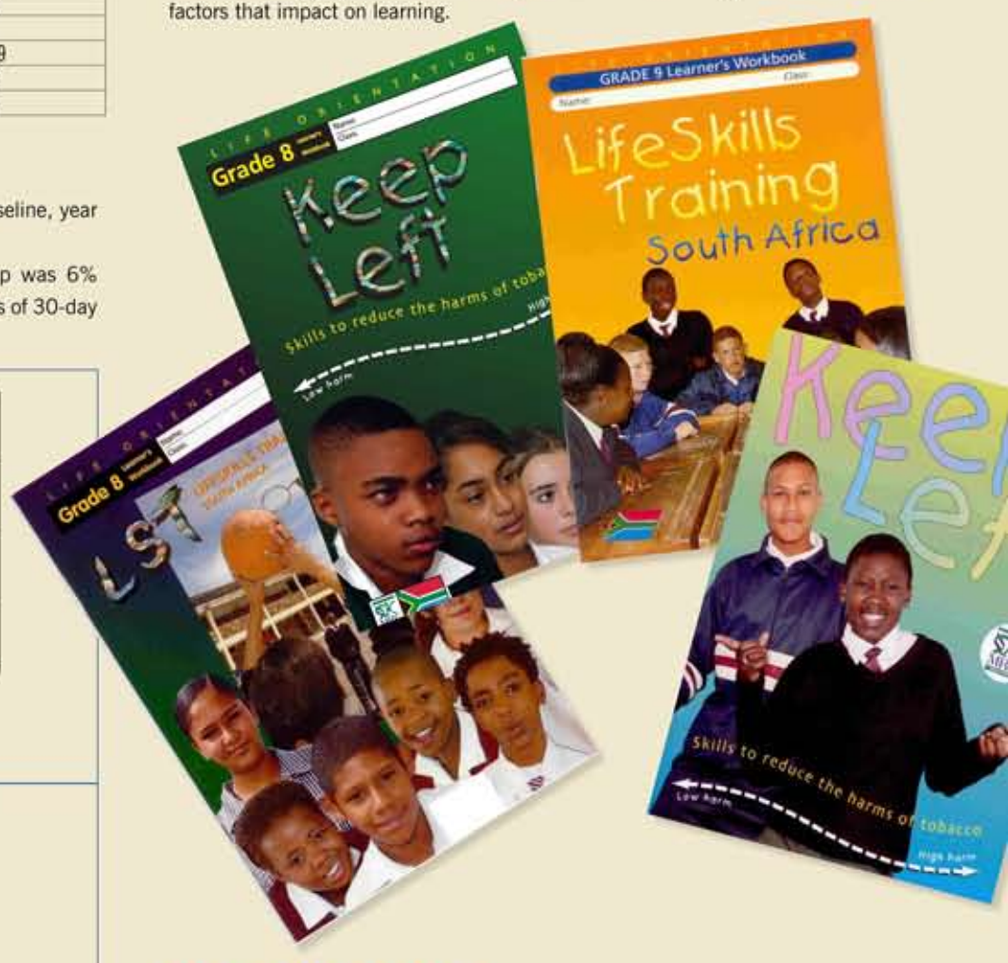
CONCLUSION

The impact of the two curricula differed significantly by gender and race.

For the primary outcome of 30-day smoking, the harm minimization curriculum appeared to work better for boys and black students, whereas the skills-based program appeared to have a greater impact on girls and "colored" students.

Overall the black African youth were more likely to perceive a HM message, while "colored" youth were more likely to perceive a skills coping message.

These findings indicate that the implementation of such curricula need to be tailored to the needs of groups of students taking into account the race, gender and contextual factors that impact on learning.



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