

Testing the National Alcohol Policy Score Card (NAPSC) to assess progress in implementing a comprehensive policy response to reduce the harmful use of alcohol in South Africa

Prof Charles Parry

Director: Alcohol & Drug Abuse Research Unit
Medical Research Council (Cape Town, South Africa)

E-mail: cparry@mrc.ac.za

Professor Extraordinary: Department of Psychiatry, University of Stellenbosch, South Africa

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BACKGROUND

In May 2010 the *Draft Global Strategy to Reduce the Harmful Use of Alcohol*¹ was approved by Member States at the 63rd session of the World Health Assembly in Geneva. A major goal of the Strategy is to support and complement public health policies in Member States. The vision behind the Strategy is improved health and social outcomes for individuals, families and communities, with considerably reduced morbidity and mortality due to harmful use of alcohol. The Strategy recognises that harmful use of alcohol can be reduced if effective actions are taken by countries.¹

Within the Strategy, policy options and interventions available for national action are grouped into 10 recommended target areas that should be seen as supportive and complimentary to each other:

1. Leadership, awareness and commitment.
2. Health services' response.
3. Community action.
4. Drink-driving policies and countermeasures.
5. Availability of alcohol.
6. Marketing of alcoholic beverages.
7. Pricing policies.
8. Reducing the negative consequences of drinking and alcohol intoxication.
9. Reducing the public health impact of illicit and informally produced alcohol.
10. Monitoring and surveillance.

These policy options are based on current scientific knowledge, available evidence on effectiveness and cost-effectiveness, experience and good practice. The Strategy, however, acknowledges that not all policy options and interventions will be applicable or relevant for all Member States and some may be beyond available resources.¹

In 2010 an alcohol strategy for the WHO African region was approved in Malabo, Equatorial Guinea, and a regional network for the implementation of this strategy has been established and is now operating.² First on the agenda is exchanging good practices. In the concluding section of the *Draft Global Strategy to Reduce the Harmful Use of Alcohol*¹ the point is made that implementation of the Strategy by Member States requires appropriate mechanism at various levels for assessment, reporting a reprogramming. However, the Strategy gives little guidance on how countries should carry out such "assessment, reporting and reprogramming."

South Africa is a country with a population of 50.4 million, with GDP per capita of \$5,566 (in 2008), an unemployment rate between 24% and 40%, an adult literacy rate of 88%, and an HIV prevalence rate of 18.1% for persons aged 15 to 49.³ While per capita pure alcohol consumption in South Africa at 9.5 litres per annum is not high in global terms, when taking into account the high levels of abstention it has one of the highest levels of per capita consumption per drinker globally.⁴ This country was also identified in the latest *WHO Global Status Report on Alcohol and Health*⁴ as having one of the highest levels of heavy episodic drinking globally among men and women. That report also singled out South Africa as having

one of the most negative ratings on an index of drinking patterns indicating high levels of harmful practices such as drinking to intoxication and drinking apart from meals. In terms of policy responses in South Africa there have been shifts in alcohol policy since the first democratic government was elected in 1994 in areas such as excise taxes, restrictions on allowable packaging for alcohol products, maximum allowable blood alcohol concentration (BAC) levels for drivers, and the imposition of warning labels on alcohol containers.⁵ More recently, with the establishment of an Inter-ministerial Committee on Substance Abuse in late 2010 there have been increasing calls by government for stronger action to be taken to reduce harmful use of alcohol, including calls for increasing the legal drinking/purchase age to 21, making any drinking and driving illegal, banning all alcohol advertising, and placing a moratorium of the granting of new liquor licenses.

The purpose of this study is to test the feasibility of using a simple instrument to assess the state of alcohol policy development and implementation at two points in time in a developing country with high levels of harmful alcohol use⁴ and which has seen recent changes in terms of alcohol policy development and implementation.⁵

METHODS

Design

A cross-sectional descriptive study was undertaken.

Sampling

The Principal Investigator (PI) has headed up an alcohol and drug research centre in South Africa for over 10 years and has been involved in alcohol/drug research in this country for over 20 years and is well acquainted with persons with expertise in alcohol policy. Persons identified by the PI as having a broad level of expertise in alcohol policy across South Africa were approached by email to complete a web-based survey. The email then took them to a secure MRC intranet website where the web-based survey was located. This was essentially a population sample of the leading experts in alcohol policy in the country and was drawn from various sectors (government, academic/research, NGOs, and CBOs).

Instrument

A 12-item self-report instrument for assessing progress in terms of the development and implementation of policy responses to reduce harmful use of alcohol, the National Alcohol Policy Score Card (NAPSC), has been developed drawing on the 10 target areas for national action with regard to alcohol policy referred in the *Global Strategy to Reduce the Harmful Use of Alcohol*.¹ In addition, two further items have been added as they are likely to be important in ensuring the proper implementation of a national strategy to reduce harmful use of alcohol: (i) whether a country has a stand-alone national alcohol strategy, and (ii) whether such a national alcohol strategy is adequately financed.⁶ An additional piece of information (not part of the NAPSC), the sector that best reflects the main area of work of the person completing the web-survey, was also requested. The instrument was available only in English as it was envisaged that all the study participants would be well able to understand this language. In addition, respondents were also asked to provide a brief comment on the ease/difficulty of completing the survey.

In terms of responses on the 12 items asking about the state of policy development and implementation in different areas, participants were required to give a rating between “1” and “10” for what they believe the situation is in South Africa currently (“2011”). After completing each response for the current situation they were asked to think back rough five years to 2006 and give a rating for the alcohol policy situation at that time for the particular item of interest using the current situation as a reference. Definitions of the endpoints (“1” and “10”) for ratings for each of the 12 areas were provided (with an addition definition for a “9” on the item dealing with drink-driving policies and countermeasures). It was envisaged that it would take participants between 15 and 20 minutes to complete the survey.

The 12-items of the NAPSC are indicated in Table 1 below. Items 1 and 7 on the NAPSC as they appear on the web-survey have been shown for illustration in Appendix 1.

Table 1. 12 NAPSC-items

#	Item	Short name
1	National alcohol strategy	Alcohol strategy
2	Leadership, awareness & commitment	Leadership
3	Pricing (excise tax)	Pricing
4	Marketing of alcoholic beverages	Marketing
5	Availability of alcohol	Availability
6	Health services response	Health services
7	Drink-driving policies & countermeasures	Drink driving
8	Community action	Community action
9	Reducing negative consequences of drinking & intoxication	Harm reduction
10	Reducing public health impact of illicit alcohol & informally produced alcohol	Informal alcohol
11	Monitoring & surveillance	Monitoring & surveillance
12	Financial resourcing	Financing

In addition participants were asked which sector best reflects their main area of work (1=Government employee, 2=academic research, 3=Treatment centre, 4=NGO or community based organisation, 5=Other) and to comment on the ease/difficulty of completing the survey and suggestions for improvement.

Procedures

On 25th August 2011 study participants were sent an email by the PI inviting them to participate in a web-survey to assess the state of alcohol policy development and implementation in South Africa in 2006 and 2011. They were informed that it would take 15 to 20 minutes to complete and comprised 12 questions requiring a response between 1 (very low) and 10 (very high) for each of the two time periods. Prior to participating in the web-survey participants were informed about the study and asked to give their consent to participate. They were informed that their anonymity would be preserved. Ethical approval for the study was granted by the Health Research Ethics Committee at the University of Stellenbosch. Reminders were sent on the 29th and 31st of August 2011.

Data analysis

The data are primarily represented via descriptive statistics (frequencies for the sector in which participants work and various measures of central tendency for the other variables) as well as graphically via radar charts. Total ratings for each participant on each of the 12-items assessing policy development/implementation for each of the two time periods were also calculated. These have been weighted (i.e. multiplied by 0.833) so as to yield a rating between 10 and 100.

RESULTS

Responses to the request to participate

A total of 37 of the 52 experts approached responded to the survey during the 13 days that it was open. As the number identifying their sector as 'treatment' or 'other' were very low (1 each), and none of the experts approached from treatment centres were government employees, respondents falling into these sectors were combined with those of NGOs and CBOs, yielding six experts from the government sector (out of a possible 12, i.e. 50.0%), 13 from the academic/research sector (out of a possible 19, i.e. 68.4%), and 18 from the re-formulated NGO/CBO sector (out of a possible 21, i.e. 85.7%). The total response rate therefore was 71.2%.

Which statistic to use to summarise ratings across respondents?

The minimum, maximum, mean, standard deviation, skewness, median, and mode for ratings on each of the NAPSC items for 2011 and 2006 are indicated below (Table 2).

Table 2. Minimum, maximum, mean, standard deviation, skewness, median, and mode for ratings on the 12 NAPSC items and total ratings (weighted) for 2011 and 2006

#	Item	Minimum	Maximum	Mean	Std dev	Skewness	Median	Mode
2011								
1	Alcohol strategy	1	7	3.65	1.92	0.06	4	1
2	Leadership	1	10	4.27	2.54	0.35	4	1,6
3	Pricing	1	10	4.27	2.28	0.23	4	4
4	Marketing	1	10	3.14	2.12	1.34	3	1
5	Availability	1	10	3.32	2.20	0.97	3	1
6	Health services	1	9	3.84	2.30	0.69	3	3
7	Drink driving	1	10	4.59	2.17	0.45	4	6
8	Community action	1	6	3.05	1.83	0.44	3	1
9	Harm reduction	1	7	3.19	1.65	0.11	3	5
10	Informal alcohol	1	6	2.54	1.57	0.78	2	1
11	Monitoring & surveillance	1	9	3.51	1.88	0.65	3	3,5
12	Financing	1	5	2.32	1.23	0.67	2	2
	Totalrating		55.8	34.75	11.63	-0.10	35.0	35
2006								
1	Alcohol strategy	1	5	2.19	1.29	0.78	2	1
2	Leadership	1	5	2.16	1.14	0.73	2	1
3	Pricing	1	7	3.16	1.83	0.55	3	4
4	Marketing	1	8	2.43	1.73	1.48	2	1
5	Availability	1	10	2.78	1.87	1.73	2	1
6	Health services	1	5	2.35	1.25	0.63	2	2
7	Drink driving	1	10	3.16	2.05	1.33	3	2
8	Community action	1	5	2.00	1.25	1.00	1	1
9	Harm reduction	1	5	2.24	1.34	0.84	2	1
10	Informal alcohol	1	5	1.95	1.08	0.95	2	1
11	Monitoring & surveillance	1	5	2.32	1.29	0.58	2	1
12	Financing	1	4	1.73	0.93	1.24	1	1
	Total rating		47.5	23.74	8.97	0.52	23.3	31.7

The ratings on the 12-items varied widely, with ratings on some items having a range from 1 to 10 while others had a much more narrow range, e.g. from 1 to 5. All but one of the items (Total rating in 2011) were positively skewed. An inspection of the distribution of ratings on individual items revealed that the mean is probably the most representative measure of central tendency to use, with some of the items having lower standard deviations than others, for example, 1.73 for Financing in 2006 compared to 2.54 for 4.59 for Drink driving in 2011, indicating a much narrower range of responses for Financing (in 2006).

Comparison of ratings across the 12 items and comparisons across time

Given the nature of the data (based on subjective assessments) it was decided to look at the *rank* ordering of mean scores across the different items as they pertain to the alcohol policy situation at the two points in time (Table 3). A low ranking indicates a higher mean rating (i.e. a more advanced level of policy development and implementation). At both points in time, items like Drink driving and Pricing had higher rankings than other items, and items such as Financing, Informal alcohol, and Community action were consistently ranked lower than other items. Some items showed positive movement over the five years in terms of their ranking in comparison to other items (e.g. Leadership), whereas others showed a decline over time (e.g. Marketing).

The comparison of mean ratings on the 10-point scale on the different items at 2011 and 2006 as well as over the five years is demonstrated graphically in Figure 1.

Table 3. Rank ordering of the mean ratings on the various items at 2011 and 2006

Item	2011	2006
Alcohol strategy	5	8
Leadership	2=	9
Pricing	2=	1=
Marketing	9	4
Availability	7	3
Health services	4	5
Drink driving	1	1=
Community action	10	10
Harm reduction	8	7
Informal alcohol	11	11
Monitoring & surveillance	6	6
Financing	12	12

A low ranking implies a higher level of policy development and implementation

Figure 1. Comparison of the ratings on the items of the NAPSC in 2006 and 2011



The data in Figure 1 indicate improvements in alcohol policy development and implementation in all areas over time, with particular movement in the areas of developing a national alcohol strategy; increasing leadership, awareness and commitment; health services’ response and drink driving (all showing an increase in mean ratings of 1.4 or more). The Total (average) rating of 35%, showed an increase of 11 percentage points over the five year period (from 24%). On the other had there appears to be little movement in the ratings on the following items over time: Marketing, Availability, Informal alcohol, and Financing (all showing an increase in mean ratings of 0.7 or less).

Comparison of ratings across sectors

There was not much difference between the different sectors on average Total ratings (across the 12 items) in 2011 and 2006, with respondents from the government sector, academic/research sector and

NGO/CBO sectors having average Total ratings of 36.7%, 36.4%, and 32.9% in 2011 respectively compared to 22.6%, 25.5% and 22.8% respectively in 2006. However, when one compares ratings across sectors across the 12 individual items in the NAPSC in 2011 there do appear to be differences (Table 4).

Table 4. Comparison of mean ratings across sectors on the NAPSC in 2011(out of 10)

Item	Sector		
	Government	Academic/research	NGO/CBO
Alcohol strategy	3.7	4.3	3.2
Leadership	6.0	3.9	3.9
Pricing	3.0	4.4	4.6
Marketing	2.2	3.9	2.9
Availability	4.5	4.3	2.2
Health services	4.2	3.9	3.7
Drink driving	5.8	4.5	4.2
Community action	2.7	2.8	3.4
Harm reduction	3.3	3.1	3.2
Informal alcohol	2.3	2.8	2.4
Monitoring & surveillance	3.7	3.4	3.6
Financing	2.7	2.5	2.1

In particular, respondents from the government sector appear to rate Leadership much higher than the other two sectors and Availability higher than respondents from the NGO/CBO sector. In contrast, academics appear to rate policy development and implementation in the Marketing area substantially higher than the respondents from the government sector.

Ease/difficulty of completing the survey and suggestions for improvement

Comments were received from 17 respondents (Table 5). Two-thirds of the comments received were positive. Of the five negative comments or comments suggesting change, one was very minor (transpose the two years in the web-survey, i.e. have the earliest time period first), whereas others indicated that respondents did not feel qualified to answer all items or felt that the needed to be provided with more information to assist them in making their rating (n=3), and one indicated that the task was too complex and that it would be better to break the items into sub-items.

Table 5. Comment on the easy or difficulty of completing the web-survey and suggestions for improvement

Type	Comments	Number
Positive (n=10)	Clear, user friendly; easy to complete; great survey format – did it on my cell phone; examples of interventions/policy measures facilitate decision-making	9
	A very thought provoking task, thanks	1
Negative or suggesting change (n=5)	Questionnaire difficult to complete as any score serves to adjudicate up to 6 or so items- would rather have had a longer questionnaire broken down into smaller questions (rating each component of the 12 areas)	1
	Not necessarily up to date or aware of current or past policies and resources on all the topics therefore guessing in answering some questions; can't answer some questions (10,11,12)	2
	Extracts from current Strategy or policy would better inform the answering of the questions	1
	Transpose 2006 and 2011	1
Not related to the web-survey	Comments on policy change needed in SA	2

DISCUSSION

Most alcohol policy surveys have focused on awareness of specific alcohol policies or attitudes to specific alcohol policy options within a country or sub-area within a country (e.g. university). There have also been cross-national surveys of the state of alcohol policy at a national level, carried out by the WHO, the European Union, and surrogates of the liquor industry.^{7,8,9} To our knowledge no studies have yet been conducted to assess the state of alcohol policy development and implementation in response to the 2010 WHO Global Strategy to reduce harmful use of alcohol.¹

The web-survey had a 71% response rate. A meta-analysis¹⁰ of response rates for 68 web- or internet-based surveys of the general public reported in 49 studies found a mean response rate of 39.6%, indicating a substantially higher response rate in this web-survey of alcohol policy experts. The meta-analysis found that the number of contacts, personalised contacts, and pre-contacts were the factors most associated with higher response rates.¹⁰ In this web-survey virtually all of the experts approached were known to the PI and they received two polite requests following the initial request giving an indication of how many responses had been received per sector and urging them to complete the web-survey.

Responses varied slightly by sector, with responses rates of 50% for respondents in the government sector, 68% among academics and researchers, and 86% among respondents from NGOs/CBOs. One respondent from the government sector contacted the PI to indicate that his internet server at work blocked the website of the MRC. He then accessed the website using a 3G card. It is possible other potential respondents from this sector had the same problem and were not so inventive. The lower response rate for academics and researchers compared to NGO/CBO representatives could partly be explained by the fact that some academics were away on sabbatical leave and in once case it was discovered that one of the researchers was ill.

The Total (average) rating in 2011 of 35%, while up by 11 percentage points in comparison to 2006, still indicates that much work remains to be done in terms of alcohol policy development and implementation in South Africa, in all 12 areas. Areas singled out as particularly needing attention were Marketing, Availability, Informal alcohol and Financing. Given that South Africa does not have a national alcohol strategy and given the fragmented approach to alcohol policy development in this country that has already been documented,⁵ it is suggested that formulating such a strategy would be a good place to begin.

The NAPSC despite its limitations (see below) was found to be easy to use by most respondents and it has the potential to stimulate discussions within a country, particularly where there appear to be differences between sectors. Such differences were identified, for example, between respondents from the government and other sectors on the issue of Leadership, awareness and commitment. It is not surprising that respondents from the government sector rated this more highly as this reflects on their performance. The consistent findings across respondents (and sectors) of improvement in alcohol policy development and implementation between 2006 and 2011 suggests that the NAPSC can be used to monitor progress over time, something that is potentially very useful as country seeks to gear up its response to the various resolutions of the WHA for countries to increase activities in the alcohol policy area, and also for WHO as it seeks to support countries in this regard.

In principle, the NAPSC could be used to facilitate comparisons across countries, though it is possible differences could be partly affected by how critical members of different societies might be in general of government policy and implementation. In Figure 2 below a comparison of average ratings on the 12 items of the NAPSC across 37 respondents in South Africa with a single expert from Norway is presented to illustrate how alcohol policy development and implementation could be compared across countries. From this it appears that Norway is more advanced than South Africa in terms of alcohol policy development and implementation on all items.

Figure 2. Comparison of average ratings in South Africa across 37 respondents with a single rating from Norway



Limitations

Some of the items comprised multiple concepts, thus prompting one of the respondents to suggest that sub-items be developed. It is likely that some respondents found it difficult to give average scores for some items thus bringing into question the validity of some of the ratings. The instrument also relies on self-ratings and not all respondents will interpret the rating scales in exactly the same way. However, with a sample size of 37 this is probably less of an issue than when only a few respondents are sampled.

In some countries some or all alcohol policies are determined at a level lower than the national level (e.g. by states or provinces) and in such countries a national average rating may not be particularly meaningful and it might be preferable to request respondents to complete the survey at a sub-national level rather than for the country as a whole.

Future research

It is recommended that further research be conducted to refine and further evaluate the utility of the NAPSC. Among other things it is recommended that:

- further research be conducted to assess the reliability of the NAPSC among the same respondents at different time periods,
- items with several concepts (e.g. Leadership, awareness, and commitment; Marketing of alcoholic beverages; Availability of alcohol; Health services response; Drink driving policies and counter-measures; and Reducing negative consequences of drinking and intoxication) be divided into sub-items and the utility of assessing each sub-item versus a composite item be compared,
- a measure for assessing the confidence of respondents' ratings on each item be added and a study should be conducted to determine whether it would be useful to factor this in to reduce the impact of responses from those respondents who feel less sure about weighting certain items on the NAPSC,
- the web-based approach to completing the NAPSC (with mean ratings being calculated later) be compared with an exercise where it is presented in a face-to-face setting with experts and a consensus position sought, and

- further research should be conducted to assess the utility of the NAPSC in different countries and the appropriateness of using the NAPSC to compare alcohol policy development and implementation across countries.

CONCLUSION

Participants found the web-survey easy to use. The overall findings and the way they are presented can be used to promote discussions around the development and implementation of national alcohol strategies, monitor progress over time, facilitate re-programming, and even compare the situation in different countries. It is recommended that further research be conducted to assess the reliability of the NAPSC, the effect of further refinements as indicated above, and its utility as a tool in facilitating cross-national comparisons.

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Appendix 1: Example of two items on the NAPSC

Item 1 on the NAPSC:

Please give a rating between “1” and “10” for each of the 12 policy areas indicated to express your opinion of where South Africa is at **currently** (“2011”) and then for each item (using your rating of the current situation as a reference) indicate where what you believe the situation was roughly five years ago (in 2006). Definitions of the endpoints (Very low (1) and very high (10) for ratings for each of the 12 areas have been provided.

1) National alcohol strategy

Very low (1) - No national policy or very fragmented

Very high (10) - Well set out, stand-alone policy with short-, medium- and long-term measurable objectives based on good evidence

Rating 2011 (current):

1= 2= 3= 4= 5= 6= 7= 8= 9= 10=

Rating 2006 (past):

1= 2= 3= 4= 5= 6= 7= 8= 9= 10=

Item 7 on the NAPSC:

7) Drink-driving policies & counter measures

Very low (1) - High (e.g. 1.0 g alcohol/100 ml of blood and higher) or no maximum BAC levels for drinking & driving. Poor enforcement of drink-driving laws with little support from judicial system. No intervention programmes (mandatory driver-education, counselling & where appropriate treatment) for persons found guilty of drink driving offenses. No public awareness campaigns regarding dangers of drinking & driving. Few public transport options for persons drinking away from where they live.

High (9) - Clear plan for addressing drink-driving that is adequately implemented (including enforced where required). Frequent random breath checks & sobriety checkpoints; administrative license suspension for persons found to have BAC levels above those allowable. Backed up by a supportive law enforcement & judicial system. Effective interventions for initial offenders (including license suspension & need to complete an intervention programme held over several weeks, becoming more stringent for repeat offenses). Supported by good public awareness campaigns & availability of alternative public transport. Having a low allowable BAC levels (0.02 to less than 0.05g/100 ml, especially for professional & novice drivers) that are well enforced.

Very high (10) - No drinking and driving allowed (e.g. drivers not allowed to have BAC to exceed 0.00 (or 0.02 to allow for medicines).

Rating 2011 (current):

1= 2= 3= 4= 5= 6= 7= 8= 9= 10=

Rating 2006 (past):

1= 2= 3= 4= 5= 6= 7= 8= 9= 10=