



Gambling Research Panel

GRP REPORT NO. 4

***Measuring Problem Gambling —
Evaluation of the Victorian Gambling Screen***

Prepared for the Gambling Research Panel by

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Acronyms	
CALD	Culturally and Linguistically Diverse
CPGI	Canadian Problem Gambling Index
DSM IV	Diagnostic and Statistical Manual of Mental Disorders Version 4
EGM	Electronic Gaming Machine
GA	Gamblers Anonymous
GA-20	Gamblers Anonymous 20 Question Screening Questionnaire
GRP	Gambling Research Panel
SOGS	South Oaks Gambling Screen
VGS	Victorian Gambling Screen
VCGA	Victorian Casino and Gaming Authority

Executive Summary

This document reports the outcomes of a study commissioned by the Gambling Research Panel concerning the Victorian Gambling Screen (VGS). The objectives of the project were to:

- evaluate the report by Flinders Technologies Pty Ltd (Ben-Tovim, Esterman, Tolchard & Battersby, 2001) detailing the VGS with regard to refining the instrument for application in a population validation study;
- evaluate the VGS against other available instruments including the South Oaks Gambling Screen (SOGS), the Canadian Problem Gambling Index (CPGI) and other instruments and research in relevant international and Australian studies and assess whether the VGS overcomes the perceived shortcomings of these instruments;
- assess the extent to which there are unique features related to problem gambling in Australia and the extent to which these are/could be adequately catered for in the VGS or a modified form of the VGS;
- review the VGS study with regard to dimensions such as: validity and reliability of scale items, methodology and scope, the test re-test reliability of the instrument over time and application to the Australian context;
- deliver a research design for a large scale (a) Victorian and (b) national validation survey that would have the dual purpose of validating the VGS and obtaining some useful information on characteristics of problem and potential problem gamblers; and
- include in the research design details of appropriate survey questions, sampling, telephone survey and other techniques data collection techniques, as appropriate, to chosen sub-populations to allow cross-validation of the VGS with other instruments, and the comparison of a Victorian population study with relevant recent research conducted in other states.

In order to fulfil these objectives, a detailed review was undertaken of the VGS and the following problem gambling measurement tools:

- the South Oaks Gambling Screens (Lesieur & Blume, 1987);
- the Canadian Problem Gambling Index (Ferris & Wynne, 2001a);
- the DSM–IV diagnostic criteria (American Psychiatric Association, 1994);
- the GA 20 Questions (Gamblers Anonymous, 1984); and
- Life Area Measures (Smart & Ferris, 1996).

The reviews were conducted using the scale development protocol developed by De Vellis (1991).

It is argued in this report that the VGS and other screening tools reviewed have two common deficiencies:

- a lack of clarity as to their purpose; and
- insufficient exposition of the theoretical and conceptual basis for the tool items.

It is noted that the main purposes for problem gambling measurement tools include:

- a current diagnostic purpose (who currently has, or has had, the problem);
- a current severity rating purpose (how severe is the problem);
- a predictive diagnostic purpose (who is at risk of developing the problem in the future);
- an intervention design purpose (what is needed to treat the problem); and

- a triage or screening purpose to refer the person for further assessment or action (what further assessment or action is required).

It is further noted that, although it is very unusual in other contexts, within the domain of problem gambling, research screening tools have been developed with the attempt of serving most or all of these disparate purposes in the one instrument.

A model of problem gambling is presented within the report as a conceptual basis for understanding and measuring problem gambling. It is recommended that all problem gambling measures should normally include some provision for each of the three components in the model.

A conceptual model of the components of Problem Gambling

Propensity/Attitudes to gambling	Attitudes to gambling Ideation about gambling Beliefs about control of gambling
Gambling behaviour and activities	Frequency of gambling behaviour Spend on gambling activities Gambling patterns, loss chasing
Consequences of gambling activities	Impact on job, family and friends Criminal behaviour Deception

A detailed content analysis of the screening tools examined in this study was undertaken using the above model. The outcomes of the content analysis, summarised below, illustrates the wide divergence across the different measurement tools in the content and weighting of the various model components.

Tool	Attitudes to Gambling items	Gambling Behaviour items	Consequences of Gambling items	Funding Source	Total scored items
SOGS	3 (15%)	2 (10%)	6 (30%)	9 (45%)	20
CPGI	2 (22%)	3 (33%)	4 (44%)	0 (0%)	9
VGS	10 (41.6%)	3 (12.5%)	11 (45.8%)	0 (0%)	24
DSM-IV	2 (20%)	4 (40%)	4 (40%)	0 (0%)	10
GA 20	6 (30%)	3 (15%)	9 (45%)	2 (10%)	20
Life Areas Measures	0 (0%)	0 (0%)	5 (100%)	0 (0%)	5

In terms of content, the SOGS emphasises the consequences of gambling behaviour; the CPGI emphasises all domains; the VGS equally emphasises attitudes to gambling and gambling consequences; DSM-IV emphasises gambling behaviour and consequences, as does the GA 20; and the Life Areas Measures emphasises gambling consequences.

The psychometric properties of each of the scales were found to be satisfactory in the published literature. Analyses of the VGS were also conducted using survey data collected in the original tool development process.

Assessing the VGS

The general conclusion with respect to the VGS is that the Flinders work was conducted to a high standard using proven and well-substantiated test development protocols. However, a more detailed explication of the conceptual and theoretical model informing its content and its specific purpose(s) would have been useful. Further validation of the tool involving a large validation study sample is required in the context of its specific purposes. It has good internal psychometric properties but the validation process requires further work.

With respect to the CPGI, its capacity to identify 'at risk' gamblers in the general population has potentially important implications for early interventions aimed at preventing or dealing with gambling problems.

In the case of SOGS, which was developed as a clinical tool to identify probable pathological gamblers, there is concern that if taken out of its clinical context, it may yield a high false-positive score in population studies. Also, excessive weight is given to items concerned with borrowing money, and the sources for funding gambling. Furthermore, because it uses a lifetime frame of reference — rather than a past month, past six months or past 12 months — it may overestimate current prevalence, as it captures in population surveys those who may have had a problem with their gambling but now no longer do so. SOGS may also be insensitive to the social and material contexts of the player, including culturally diverse contexts. It may be better used as a screen prior to validation of problem gambling status by application of DSM-IV or clinical interview, as appropriate.

Because of the differences in emphasis of the various tools and their different cut-off points and scoring methods, the selection of the most appropriate tool for studies of gambling behaviour within the Victorian community requires data that is not available in any of the studies conducted to date.

In order to select the most suitable gambling measurement tool for subsequent community studies, a validation study involving the CPGI, the VGS and the SOGS is appropriate in line with the GRP 2003 study cross-validating all three screens in a large-scale survey of the Victorian community. The researchers believe the CPGI and the VGS most closely reflect the aims of the Panel's community studies and that the SOGS is a standard international tool that must be included in the validation study for comparability reasons.

The survey design for such a validation study should ensure that:

- sufficient numbers of people at different levels of gambling activity are included as the study must show that the tools can work well across the full range of gambling participation levels and outcomes, not just for problem gamblers; and
- key groups including men, women, people from metropolitan, rural and regional settings and varied cultural backgrounds are included in sufficient number in the study.

This report also includes consideration of the issue of a national study of problem gambling. While noting that the survey methodology for a Victorian and a national study would be similar, and use the same survey tools, it is noted that the design of the sample frame would need to be informed by a consideration of the groups to be compared in the analyses.

Policy implications of the present study

In the final section of the report, consideration is given to the important policy considerations flowing from the development of credible measures of problem gambling.

It is argued that the development of credible measures to inform such research fits squarely within the requirements of government for evidence-based policy and practice. It is argued that in gambling policy the development of credible measures of problem gambling are the linchpin of future research and policy. The numbers and distribution of problem gamblers within the community have important

implications for the design and delivery of services targeted at problem gamblers. Who they are, and where they are located, has a pivotal impact upon service design and funding. Clearly, there is a need to deliver services where they are needed. However the implications of the present study are broader than merely counting existing numbers in order to target service design and delivery, important as this may be.

When there are credible measures of problem gambling, then it is possible to conduct studies that may better estimate the occurrence and patterns of problem gambling. This will also enable the development of more effective preventive strategies and measures by government and others, and an improved capacity to evaluate such solutions in a timely manner. Thus the development of problem gambling measures is far from just a technical exercise.

The validation study informed by this report and due for completion in October 2003, should deliver a credible, reliable and practical set of measurement tools that will best serve the Victorian Government and community in future research related to gambling and problem gambling.

Background to this project

The Gambling Research Panel Research Program

This project has been commissioned by the GRP established by the Victorian Government.

The GRP was established in May 2000 in Victoria with the enactment of the *Responsible Gambling Act 2000*. The panel is comprised of three members. Prior to the establishment of the GRP, the Victorian Casino and Gaming Authority (VCGA) formed a research committee through which gambling research was commissioned. This research focused on the social and economic impact of gaming. The GRP has taken over this function and has now devised a research program through a consultative process. A document describing the Panel's program is available from the Panel's website, <http://www.grp.vic.gov.au>

Project 1a from the GRP's program is the project reported upon in this document. However as Project 1b in the program is linked to the outcomes of the present study, it is useful to understand the relationship of the present study to the other components of the GRP's intended research program. The descriptions of the pertinent studies provided by the GRP in its 2001–2002 Research Plan are reproduced below:

Description of Project 1a Scoping Study: Evaluating the VGS against other recently developed instruments (Measuring problem gambling - Evaluation of the VGS)

Scope

Evaluate the VGS as outlined in the VGS research report on research commenced in 1997 under the previous VCGA Research Committee and published by the GRP (Victorian Gambling Screen, 2001). Evaluation will assess the VGS against other recently developed instruments, which purport to assist in identification of problem gambling, impact on families and gambling as a recreational pursuit.

Outcomes

Using in particular the North American SOGS and Canadian research on Problem Gambling Screens, this research will evaluate the scope, construction and scoring regimes of the VGS, ensuring that further development is timely and appropriate to the Australian research context. The research will identify any components of the VGS, which are ambiguous, unclear or redundant and refine scale items in the light of recent international and national research. It will guide decision-making on the efficacy of undertaking larger scale validation and self-scaling exercises.

Description of Project 1b Problem Gambling Prevalence Study: Validate the new VGS

Project 1b will proceed in the manner outlined below, subject to the scoping exercise outlined in Project 1a. Depending on the outcome of negotiations with other states, validation may incorporate co-operative research and co-funding models with other states.

Scope

Subject to Project 1a, further refine VGS and apply to a population sample for validation of the screen and insight into problem gambling in different communities.

Method

- Develop a best practice approach to administration of the VGS by telephone and face-to-face interview.

- Design a survey using the newly developed VGS to determine the incidence of problem gambling in various categories including gender, age group, geographical area, ethnicity, socio-economic level and smoking.
- Apply to a population sample for broader validation with a large enough sample to provide indicators on problem gambling in different communities and cross validate with other internationally used screens such as SOGS and CPGI.

Outcomes

- Availability of an Australian Gambling Screen that is superior to SOGS and overseas instruments, to be used as a tool in related research programmes.
- Improved targeting of problem gambling avoidance programmes and harm minimisation strategies based on results from application of VGS to population sample.
- The present project outcomes have, therefore, been devised with a view to informing the proposed Project 1b.

Project objectives and deliverables

The project brief specifies the following activities and deliverables to be undertaken and provided during the course of the project:

- Evaluate the report by Flinders Technologies Pty Ltd (Ben-Tovim, Esterman, Tolchard & Battersby, 2001) detailing the VGS with regard to refining the instrument for application in a population validation study;
- Evaluate the VGS against other available instruments including SOGS, the CPGI and other instruments and research in relevant international and Australian studies and assess whether the VGS overcomes the perceived shortcomings of these instruments;
- Assess the extent to which there are unique features related to problem gambling in Australia and the extent to which these are/could be adequately catered for in the VGS or a modified form of the VGS;
- Review the VGS study with regard to dimensions such as: validity and reliability of scale items, methodology, scope, the test re-test reliability of the instrument over time and application to the Australian context;
- Deliver a research design for a large scale (a) Victorian and (b) national validation survey that would have the dual purpose of validating the VGS and obtaining some useful information on characteristics of problem and potential problem gamblers; and
- Include in the research design details of appropriate survey questions, sampling, telephone survey and other techniques of data collection, as appropriate, to chosen sub populations that will cross validate the VGS with other instruments, and that will allow comparisons of a Victorian population study with other relevant, recent research in other States.

Some preliminary comments on the project design and purpose

The development and use of a standard tool or tools to monitor problem gambling within Victoria and other jurisdictions is a necessary and laudable objective. Such actions would potentially enable:

- The conduct of tracking studies to monitor the incidence and prevalence of problem gambling within the community;
- Benchmarking of problem gambling incidence and prevalence against past and current data within the Victorian and other jurisdictions;

- Evidence based resource allocation and program design for services and interventions targeted at people with gambling problems.

Although these goals are laudable, there has been considerable disagreement within the problem gambling research literature and amongst those involved in the regulation of gambling and problem gambling services as to the selection and use of the most appropriate measurement tools. Unlike in some academic debates, this debate impacts upon the resolution of issues such as ‘how serious and widespread is problem gambling within the community?’ and ‘what should we do about it?’ The Victorian community and communities in other jurisdictions desire pertinent, evidence-based answers to these questions.

As noted in this review, the debate surrounding the measurement of problem gambling has been complicated by the varied, disparate and, perhaps mutually exclusive, objectives and purpose pursued by the developers of the respective measurement instruments purported to measure gambling and problem gambling. In addition, we have found in our content analysis of these tools that there is a concerning lack of clarity as to the actual stated objective described within existing tools. This is an issue of concern since the utility of a measure is inexorably bound to its stated purpose. This report emphasises the need for clarity in defining the purpose or purposes of problem gambling measurement tools in order to determine whether or not they achieve their stated objectives.

We also argue in his report that there is a further lack of derivation of the measurement items within most tools from a clearly articulated model of problem gambling. Determining what to measure and how to measure it needs to relate closely to sound and validated conceptual models and theories. Thus some attention within this report is devoted to clarification of the issue of a theoretical model of gambling and problem gambling in order to meet the objectives of the project brief.

We now outline the activities that have been undertaken within the project in order to meet the research project brief objectives.

