TABLE 19: AFFIRMATIVE RESPONSES TO EXPERIENCES OF GAMBLING FOR LOTTO ONLY VS OTHER PLAYERS

	LOTTO ONLY %		OTHER %	
	1995 N=140	1997 N=113	1995 N=159	1997 N=175
FINANCIAL				
Winning at gambling has helped me financially	14.3	**20.4**	44.0	**36.0**
When I gamble I only risk what I can afford[1]	77.1	**77.9**	91.2	**82.9**
I have won more than I have lost at gambling	32.1	**30.1**	49.1	**56.6**
I've had a big win from gambling ($1,000+)[2]	7.1	**7.1**	31.4	**20.6**
EMPLOYMENT				
I've been gambling with people from work	27.9	**25.7**	37.1	**37.7**
Being a person who gambles has helped me get on at work	2.9	**8.0**	17.0	**15.4**
Thinking about gambling has helped in a boring job	4.3	**4.4**	18.9	**13.1**
Gambling is something we all talk about at work	37.1	**30.1**	45.9	**37.7**
FAMILY AND FRIENDS				
Gambling has given me something to talk about with family and friends	30.0	**31.9**	60.4	**52.6**
I have gone gambling with family or friends	50.0	**42.5**	73.0	**76.6**
PERSONAL EXPERIENCES				
Gambling has been a hobby and interest for me	53.6	**55.8**	78.0	**72.6**
Gambling has given me pleasure and fun	72.1	**67.3**	87.4	**86.3**
My gambling is problem free	81.4	**75.2**	85.5	**79.4**
I daydreamed of getting a big win	75.7	**74.3**	79.9	**76.6**
I am more likely to gamble for celebration	29.3	**25.7**	56.6	**54.9**
My gambling has been skillful[3]	17.9	**13.3**	56.6	**41.7**
When I was gambling I felt relaxed	37.1	**32.7**	72.3	**69.1**

[1] X^2, 1df=5.1; p<.05 OTHERS
[2] X^2,1df=5.2; p<.05 OTHERS
[3] X^2,1df=7.4; p<.01 OTHERS

In 1995, the clearest trend to emerge across all types of impact was that the LOTTO ONLY group reported fewer positive experiences than the OTHERS group. This trend is very much apparent in 1997 as well. Response rates in 1995 and 1997 for the LOTTO ONLY group fluctuate and are detailed below. Amongst the OTHER group, the trend for 1997 is a lower incidence of reporting the positive consequence of gambling.

Motivational aspects of the OTHER group were tested for significant differences when comparing 1995 and 1997 (using Chi-squared analysis).

- there was a significant decline in the numbers of people who risked only what they could afford;
- significantly fewer people reported having had a big win; and
- significantly fewer people reported that their gambling had been skilful.

No significant differences were found between years for LOTTO ONLY respondents.

7.1.3 Negative Impacts Reported by Regular Players

As in 1995 comparisons of the two groups of regular players showed that the endorsement of the negative impacts of gambling was significantly higher in all areas for the regular OTHER group. Players who once per week or more often gamble on continuous forms such as gaming machines, racing or casino gaming are not only more likely to endorse the previously described positive, motivational experiences, but also the negative potentially harmful impacts.

Personal Experiences: As in 1995 personal experiences are the most frequently reported impacts, but are indicated less often in 1997. For the regular OTHER group every positive personal experience of gambling was given a lower endorsement in 1997; the respondents' gambling was rated as less interesting, less pleasurable, less problem free etc. Similar, smaller reductions in the ratings of positive personal experiences for the regular LOTTO ONLY group were also shown for the 1997 respondents compared with 1995. These findings are noted as trends only, and are not statistically significant.

TABLE 20: AFFIRMATIVE RESPONSES TO NEGATIVE EFFECTS OF GAMBLING FOR REGULAR PLAYERS: LOTTO ONLY VS OTHER

	LOTTO ONLY				OTHER			
	1995		1997		1995		1997	
	N=140	%	N=113	%	N=159	%	N=175	%
PERSONAL								
	Significance				Significance			
I have told lies about my gambling	1	0.7	4	3.5	39	24.5 [1]	26	14.9
When I felt depressed I used gambling to escape	6	4.6	5	4.4	30	18.9 [2]	32	18.3
I have felt that my gambling was a problem*	2	1.4	5	4.4	25	15.7	27	15.4
After losing heavily I have felt depressed	27	19.3 [3]	13	11.5	74	46.5 [4]	60	34.3
I went for help with my gambling	0	0.0	1	0.9	3	1.9	4	2.3
When I've lost gambling, I've bragged about winning*	8	5.7	13	11.5	28	17.6	35	20.0
I've felt like stopping but didn't think I could*	14	10.0 [5]	17	15.0	41	25.8 [6]	43	24.6
After losing I've gone back to win back money lost*	12	8.6	13	11.5	61	38.4	60	34.3
If lost more than planned, go on if excited	17	12.1 [7]	14	12.4	54	34.0 [8]	61	34.9
When I've gambled I've gone on for longer than planned*	32	22.9 [9]	15	13.3	81	50.9 [10]	79	45.1
When I had a bad day I was more likely to gamble	11	7.9	6	5.3	47	29.6 [11]	39	22.3
When I finished gambling I felt guilty	16	11.4 [12]	14	12.4	47	29.6 [13]	49	28
Each time I gambled I expected to win	74	52.9 [14]	51	45.1	119	74.8 [15]	116	66.3

[1] X^2,1df=25.6; p<.01 OTHERS
[2] X^2,1df=32.2; p<.01 OTHERS
[3] X^2,1df=16.9; p<.01LOTTO ONLY
[4] X^2,1df=66.5; p<.01 OTHERS
[5] X^2,1df=22.5; p<.01 LOTTO ONLY
[6] X^2,1df=44.8; p<.01 OTHERS
[7] X^2,1df=18.4; p<.01 LOTTO ONLY
[8] X^2,1df=67.8; p<.01 OTHERS
[9] X^2,1df=19.8; p<.01 LOTTO ONLY
[10] X^2,1df=94.0; p<.01 OTHERS
[11] X^2,1df=40.1; p<.01 OTHERS
[12] X^2,1df=18.4; p<.01 LOTTO ONLY
[13] X^2,1df=52.2; p<.01 OTHERS
[14] X^2,1df=79.1; p<.01 LOTTO ONLY
[15] X^2,1df=161.5; p<.01 OTHERS

TABLE 20 CONTINUED: AFFIRMATIVE RESPONSES TO NEGATIVE EFFECTS OF GAMBLING FOR REGULAR PLAYERS: LOTTO ONLY VS OTHER

	LOTTO ONLY				OTHER			
	1995		1997		1995		1997	
	N=140	%	N=113	%	N=159	%	N=175	%
FAMILY & FRIENDS								
		Significance				Significance		
My gambling has caused problems for family or friends	2	1.4	4	3.5	19	11.9 [1]	21	12.0
My gambling has caused the break-up of relationship	1	0.7	2	1.8	6	3.8	4	2.3
My family or friends have criticised my gambling*	3	2.1	4	3.5	43	27.0 [2]	39	22.3
My gambling has caused arguments about money with family/friends*	3	2.1	7	6.2	28	17.6 [3]	26	14.9
I have hidden betting slips, lottery tickets etc. from family or friends*	3	2.1	3	2.7	13	8.2 [4]	14	8.0
My gambling has been more important than socialising	6	4.3	1	0.9	35	22.0 [5]	24	13.7
EMPLOYMENT								
I've moved or changed jobs because of my gambling	0	0.0	1	0.9	5	3.1	1	0.6
I've lost time from work or study due to gambling*	4	2.9	2	1.8	10	6.3	7	4.0
My gambling has stopped me working efficiently	1	0.7	1	0.9	12	7.5	2	1.1
I've been sacked from my job because of gambling	0	0.0	1	0.9	3	1.9	0	0.0

[1] X^2,1df=20.4; p<.01 OTHERS
[2] X^2,1df=40.1; p<.01 OTHERS
[3] X^2,1df=25.6; p<.01 OTHERS
[4] X^2,1df=13.3; p<.01 OTHERS
[5] X^2,1df=23.5; p<.01 OTHERS

TABLE 20 CONTINUED: AFFIRMATIVE RESPONSES TO NEGATIVE EFFECTS OF GAMBLING FOR REGULAR PLAYERS: LOTTO ONLY VS OTHER

	LOTTO ONLY				OTHER			
	1995		1997		1995		1997	
	N=140	%	N=113	%	N=159	%	N=175	%
	Significance				Significance			
FINANCIAL								
I've gambled to try and win money to pay gambling debts	12	8.6	0	0.0	30	18.9	0	0.0
I spent more than I could afford on gambling	9	6.4	9	8.0	55	34.6 [1]	49	28.0
I've borrowed money to gamble or pay gambling debts*	13	8.2	1	0.9	1	0.7	12	6.9
I've borrowed money and not paid it back for gambling*	0	0.0	2	1.8	5	3.1	2	1.1
If I had urgent debts I would go on gambling	3	2.1	5	4.4	23	14.5 [2]	13	7.4
Family and friends have had to pay my gambling debts	0	0.0	4	3.5	4	2.5	15	8.6
LEGAL								
I've borrowed money without permission to gamble	0	0.0	1	0.9	6	3.8	9	5.1
Thought about doing something illegal for gambling money	3	2.1	5	4.4	9	5.7	11	6.3
I've appeared in court on charges related to gambling	0	0.0	1	0.9	7	4.4	1	0.6
My gambling has led to problems with the police	1	0.7	1	0.9	3	1.9	1	0.6
I have been in prison because of my gambling	0	0.0	1	0.9	1	0.6	1	0.6

(* Items in the SOGS)

Chi-squared analysis revealed some significant differences between years on response patterns to the negative impacts of gambling, statistics are denoted in footnotes.

[1] X^2,1df=52.2; p<.01 OTHERS
[2] X^2,1df=12.3; p<.01 OTHERS

Comparisons between the 1995 and 1997 responses show a trend across most items for the OTHER group toward lower endorsement of negative experiences, whereas the LOTTO ONLY group's endorsements tended to either remain the same or increase in 1997. This increase in the negative experiences reported by those who participated regularly in 'softer' forms of gambling is more clearly indicated in Table 21 below, in the areas related to family and friends, (e.g from Table 20, "my gambling has caused arguments about money with family/friends: 2.1% in 1995 and 6.2% in 1997), and in legal related items, (e.g. from Table 20, "thought about doing something illegal to get money to gamble", 2.1% in 1995 and 4.4% in 1997).

In the LOTTO ONLY group there are only a few personal negative impacts where more than 1 in 10 players report ever experiencing them, e.g. "I've felt like stopping but didn't think I could" (15%).

TABLE 21: AFFIRMATIVE RESPONSES TO NEGATIVE IMPACTS FOR LOTTO ONLY VERSUS OTHER PLAYERS

FORM	N	PERSONAL	FINANCIAL	FAMILY & FRIENDS	EMPLOY-MENT	LEGAL
		%	%	%	%	%
LOTTO ONLY 1995	140	62.9	14.3	7.1	2.9	2.9
LOTTO ONLY 1997	**113**	**61.1**	**13.3**	**10.6**	**2.7**	**5.3**
OTHER 1995	159	84.3	44.7	43.4	10.1	10.1
OTHER 1997	**175**	**86.3**	**35.4**	**36.6**	**4.6**	**10.9**

Table 22 provides the same information as given in Table 21, but extended to show breakdowns for each sex.

TABLE 22: AFFIRMATIVE RESPONSES TO NEGATIVE IMPACTS FOR LOTTO ONLY AND OTHER BY SEX

FORM	N	PERSONAL	FINANCIAL	FAMILY & FRIENDS	EMPLOY-MENT	LEGAL
		%	%	%	%	%
LOTTO ONLY						
Men – 1995	71	67.6	11.3	7.0	4.2	1.4
Men – 1997	**56**	**71.4**	**17.9**	**8.9**	**1.8**	**3.6**
Women - 1995	69	58.0	17.4	7.2	1.4	4.3
Women - 1997	**57**	**50.9**	**8.8**	**12.3**	**3.5**	**7.0**
OTHER						
Men – 1995	99	91.9	49.5	49.5	13.1	11.1
Men – 1997	**104**	**90.4**	**35.6**	**42.3**	**5.8**	**13.5**
Women - 1995	60	71.7	36.7	33.3	5.0	8.3
Women - 1997	**71**	**80.3**	**35.2**	**28.2**	**2.8**	**7.0**

With the exception of 'employment' in 1997 compared with 1995, all other categories of impacts show increased levels of reporting by male LOTTO ONLY players. More women reported impacts in the 'family and friends', 'employment', and 'legal' categories, and fewer women reported impacts in the 'personal' and 'financial' categories in 1997.

For men in the OTHER group there has been a decline in 1997 across all categories of impacts with the exception of 'legal' impacts. For women in the OTHER group declines in impacts reported occurred in 1997 for all categories with the exception of 'personal'.

8. ESTIMATING THE PREVALENCE OF PROBLEM GAMBLING IN NEW SOUTH WALES

Section 8 contains:

TABLES

8.1 Measuring the Prevalence of Problem Gamblers

The South Oaks Gambling Screen (SOGS) is a questionnaire or measurement instrument made up of 13 questions about a player's experiences of harmful impacts that may arise from the players' gambling. (These are the 13 items marked * at Table 20). The SOGS is the only validated measure for assessing whether an individual is likely to satisfy the criteria for the diagnosis *pathological gambler* as specified in the Diagnostic and Statistical Manual (IVth Edition) of the American Psychiatric Association (1994). The validation was completed by Lesieur & Blume (1987) using a known group of client gamblers who satisfied the diagnostic criteria, who also then completed the SOGS questionnaire. A score of five or more points on the SOGS was chosen as the basis for discriminating between those who were pathological gamblers and those in the control group who were not. This validation work was completed in the United States where the test continues to be used as a way of measuring or detecting the prevalence of cases of pathological gambling in the general population. However, significant concerns have been raised about the accuracy of the SOGS; specifically its probable over-estimation of 'cases' by a factor of 5.

In a national survey in Australia completed in 1991-92 the project team from the AIGR rejected the cut-off score of 5 preferring a score of 10 or more which it was argued identified a group of gamblers whose weekly expenditure on gambling was similar to that reported in published work for "pathological" gamblers in Australia. Given that this was a change from the original SOGS validation the name "Problem Gambler" was preferred. Such a label also avoids some of the pejorative connotations of the psychiatric terminology and 'problem gambling' rapidly became accepted in Australia by various State government departments charged with developing policies and services to assist individuals and families adversely affected by gaming and wagering.

The cut-off of 10 or more points on the SOGS was used in the Tasmanian and Western Australian studies (Dickerson & Baron, 1994; Dickerson & Maddern, 1996; Dickerson, Baron, & O'Connor, 1994). Nevertheless, lower scores were also used to indicate the extent to which regular players may be *at risk* of incurring gambling related problems. In other words there is a case for using the scores on the SOGS not simply to identify 'cases' but also as a continuous scale of increasing likelihood that a respondent will be experiencing gambling related problems. Given that the estimates for Australia have been of the order of 1% and lower, this is a fragile process where the accuracy of a survey/questionnaire method is stretched to its limits. It is preferable to use the SOGS as a scale, thereby increasing reliability over the use of single items, and to establish the level and type of risk associated with ranges of scores. (It should be noted that the US studies are no more comprehensive, and were used on a population with vastly less exposure and access to gambling.)

In the 1995 New South Wales Study 2, the project team used a descriptive database from the Impulse Disorder Unit of the Department of Psychiatry (University of New South Wales), directed by A/Professor Alex Blaszczynski to support the method of interpreting SOGS scores in the Australian context and in later sections to develop estimates of the nature and extent of harmful impacts (e.g. Page 70 "Evaluation of the Social and Economic Impacts of Gambling Related Problems). The SOGS scores of this 'Clinic Sample' are shown at Table 23 (below).

TABLE 23: DISTRIBUTION OF SOGS SCORES FOR 82 PATHOLOGICAL GAMBLERS (14 WOMEN, 68 MEN)

SOGS score	%	N
3	1.2	1
5	1.2	1
7	9.8	8
8	2.4	2
9	7.3	6
10	78.1	64

These data provide support for the original preference for the cut-off of 10 points or more used in the main Australian studies completed so far. An argument can be made for lowering the cut-off to 7 as 97% of the above sample would be included. The more conservative position is preferred below in the presentation of the data from the survey for New South Wales. The reasons for this are that personal communications with researchers in the USA and New Zealand confirm that scores of 10 or more are associated with an insignificant level of false positives. In other words a respondent scoring 10 or more is very unlikely **not** to be a problem gambler.

Nevertheless, scores below 10 can be considered to provide an indication that the respondents are increasingly likely to be *at risk* of experiencing severe gambling related problems in their lives. Based on the above SOGS data base and the team's expert opinion it was agreed that scores between 7-9 would correctly include 50% of those *at risk* i.e. (50% true positives), and scores 5-6 would correctly include 20% of those *at risk*.

These data provide support for the original concerns regarding the use of the SOGS to identify cases. Although some client problem gamblers do score below 10, such a score provides a relatively secure cut-off point.

Table 24 below summarises the way in which the distribution of scores on the SOGS was interpreted in the 1995 study and in the present project. All respondents scoring 10 or more were considered to be almost totally *at risk* of experiencing significant harmful impacts arising from their gambling. The lower the SOGS score the smaller the proportion of respondents estimated to be *at risk*.

TABLE 24: THE ACCURACY WITH WHICH SOGS SCORES IDENTIFY PLAYERS AT RISK OF SIGNIFICANT GAMBLING RELATED PROBLEMS.

SOGS Scores	Proportion *At Risk*	%
5-6	1 in 5	20
7-9	1 in 2	50
≥10	1 in 1	100

The following section of the report examines the way in which the demographic information and players' preferred gambling products show associations with greater or lesser risk of gambling related problems. The distribution of SOGS scores for men and women and country New South Wales versus metropolitan New South Wales are at Tables 25 and 26 below.

TABLE 25: PERCENTAGE OF COUNTRY AND CITY PLAYERS SCORING ON SOGS; 1995 AND 1997

SOGS SCORES	COUNTRY %		CITY %	
	1995	**1997**	1995	**1997**
	n=519	**n=480**	n=871	**n=729**
≥5	1.5	**2.3**	2.6	**2.6**
≥10	0.2	**0.0**	0.7	**0.5**

In 1997 the numbers of people in each SOGS score category across both country and metropolitan New South Wales have declined. The greater proportion of '*at risk*' respondents reside in city areas, although the relative differences between the areas are small and insignificant. Noticeably, no country respondents recorded a score of 10 or more on SOGS in 1997. The sample numbers, however, are small.

TABLE 26: PERCENTAGE OF MALES AND FEMALES SCORING ON SOGS; 1995 AND 1997

SOGS SCORES	*MALE* %		*FEMALE* %		*DIFFERENCE MARGINS* %	
	1995	1997	1995	1997	1995	1997
	n=686	n=594	n=704	n=615		
5 and above	3.5	3.2	1.0	1.8	2.5	1.4
10 and above	0.7	0.5	0.3	0.2	0.4	0.3

There is some indication that males are at greatest risk of incurring gambling related problems at all levels of severity by a factor of 3 compared with women. During 1997 more women reported scores of 4+ and 5+ on SOGS and slightly fewer scored in the 10+ category.

As in 1995 men continue to report the highest scores on SOGS, although the margin separating men and women has narrowed, as shown in the final 2 columns of Table 26. For example 2.5 percentage points separated men and women who scored 5+ in 1995, whilst that margin reduced to 1.4 in 1997.

Table 27 shows that compared with 1995 the present results show a rise in the proportion of LOTTO ONLY group scoring in the *at risk* categories on the SOGS, eg. 1.4% in the 5-9 category compared with 3.5% in 1997. Table 28 shows that this increase arises from women respondents in the LOTTO ONLY group.

Table 27 also shows that in the OTHER group the proportion of the *at risk* scores in the highest SOGS category (10-15) has fallen from 3.8% in 1995 to 1.7% in 1997. Table 28 shows that this decrease arises from the men respondents in the OTHER group.

These two changes have contributed to the erosion of the differences between the distribution of SOGS scores for men and women from 1995 to 1997 shown in Table 26; i.e. a greater proportion of women LOTTO ONLY players scoring in the SOGS 5-9 category and proportionally fewer men of the OTHER group scoring in the 10-15 category.

TABLE 27: SCORES ON THE SOGS FOR REGULAR GAMBLERS LOTTO ONLY VS OTHER

	N	0	1-2	3-4	5-9	10-15
Group		%	%	%	%	%
LOTTO ONLY - 1995	140	68.6	21.4	7.9	1.4	0.7
LOTTO ONLY - 1997	**113**	**61.1**	**28.3**	**6.2**	**3.5**	**0.9**
OTHER - 1995	159	27.7	34.6	20.1	13.8	3.8
OTHER - 1997	**175**	**33.7**	**27.4**	**24.6**	**12.6**	**1.7**

TABLE 28: SCORES ON THE SOGS FOR LOTTO ONLY VS OTHER BY SEX

	N	0	1-2	3-4	5-9	10-15
		%	%	%	%	%
LOTTO ONLY						
Men - 1995	71	70.4	19.7	7.0	2.8	0.0
Men - 1997	**56**	**53.6**	**37.5**	**5.4**	**1.8**	**1.8**
Women - 1995	69	66.7	23.2	8.7	0.0	1.4
Women - 1997	**57**	**68.4**	**19.3**	**7.0**	**5.3**	**0.0**
OTHER						
Men - 1995	99	19.2	34.3	24.2	17.2	5.1
Men - 1997	**104**	**28.8**	**26.9**	**27.9**	**14.4**	**1.9**
Women - 1995	60	41.7	35.0	13.3	8.3	1.7
Women - 1997	**71**	**40.8**	**28.2**	**19.7**	**9.9**	**1.4**

Tables 27 and 28 also confirm the well established strong association between *'at risk'* scores on the SOGS and respondents who are regular weekly players of continuous forms of gambling, i.e. the OTHER group.

TABLE 29: SOGS SCORES BY YEAR FOR LOTTO ONLY AND OTHER RESPONDENTS

	LOTTO ONLY		*OTHER*		*Population Sample*
					%
	≤4	≥5	≤4	≥5	
	%	%	%	%	
1995	97.9	2.1	82.4	17.6	(2.0)
1997	**95.6**	**4.4**	**85.7**	**14.3**	**(2.1)**

Table 29 also shows the much higher proportion of the OTHER group who score in the *at risk* category on the SOGS (5 and above) compared with the LOTTO ONLY group for both years 1995 and 1997.

The increase in the LOTTO ONLY group in the *at risk* category from 2.1% in 1995 to 4.4% in 1997 represents a real change in the population sample (i.e. from 1995 to 1997 the proportion of

the total sample who satisfied the criteria for inclusion in the LOTTO ONLY group fell from 26.5% to 23.3%).

However, the decrease shown in Table 29 for the OTHER group in the *at risk* category (5 and above) from 17.6% in 1995 to 14.3% in 1997 masks a small but real rise for the population sample as a whole (figures given in parentheses in Table 29). This is because as a proportion of the total population sample the OTHER group rose from 11.4% in 1995 to 14.5% in 1997. This increase in mainly attributable to the increase in the proportion of the population particularly amongst women who play gaming machines weekly (7.8% in 1995 to 9.9% in 1997 – see Table 3, page 29).

TABLE 30: SCORES ON THE SOGS BY FAVOURITE FORM FOR OTHER GROUP

	N	0	1-2	3-4	5-9	10-15
Form		%	%	%	%	%
InstantLottery/Pools/Bingo-1995	24	45.8	33.3	8.3	12.5	0.0
Instant Lottery/Pools/Bingo-1997	**28**	**42.9**	**32.1**	**14.3**	**7.1**	**3.6**
Keno - 1995	15	33.3	40.0	20.0	6.7	0.0
Keno - 1997	**12**	**41.7**	**25.0**	**33.3**	**0.0**	**0.0**
Cards - 1995	4	75.0	0.0	0.0	0.0	25.0
Cards - 1997	**6**	**83.3**	**0.0**	**16.7**	**0.0**	**0.0**
Racing - 1995	42	11.9	40.5	26.2	16.7	4.8
Racing - 1997	**42**	**28.6**	**26.2**	**26.2**	**16.7**	**2.4**
Gaming Machines - 1995	34	20.6	26.5	23.5	23.5	5.9
Gaming Machines - 1997	**57**	**19.3**	**33.3**	**24.6**	**21.1**	**1.8**
Casino - 1995	6	0.0	50.0	33.3	16.7	0.0
Casino - 1997	**2**	**0.0**	**0.0**	**50.0**	**50.0**	**0.0**
Sports Betting 1997	**2**	**100.0**	**0.0**	**0.0**	**0.0**	**0.0**
Other - 1995	7	42.9	57.1	0.0	0.0	0.0
Other - 1997	**5**	**40.0**	**40.0**	**20.0**	**0.0**	**0.0**

Table 30 (page 63) shows that racing (including on-course totalizator, off-course TAB and bookmakers) and gaming machines (not including gaming machines at the casino) are numerically the largest player groups and also those with the greatest *at risk* profile with about 1 in 5 scoring 5 or more on the SOGS. Regular weekly and more frequent participation in casino gaming may be associated with a similar level of risk of significant gambling related problems but the numbers are too small to confirm or disprove this possibility at this time.

In Table 30 the changes in the distribution of *at risk* scores in the SOGS (5 or more) from 1995 to 1997 for Racing and Gaming Machines must be evaluated with care.

For Racing, when this sub-group total (N = 42) is expressed as a percentage of the total population samples there is a small increase from 3.02% in 1995 to 3.4% in 1997. Therefore, the decrease in the proportion of such players who score in the highest *at risk* category on the SOGS (10-15) may reflect a real change in the population although the number of respondents (2 in 1995; 1 in 1997) is too small for this to be significant.

In contrast the decrease in the proportion of Gaming Machine players who score in the *at risk* category on the SOGS (5 or more) masks a small but real increase in such scores in the population sample as a whole. This is clarified in Table 30A which shows that the increase in the regular player base for gaming machines has resulted in a fall in the proportion who score in the *at risk* category, but also an overall rise in the percentage of the population who prefer regular gaming machine play and who score in the *at risk* category on the SOGS (5 or more).

TABLE 30A: GAMING MACHINE *AT RISK* SCORES AS A PERCENTAGE OF WEEKLY GAMING MACHINE PLAYERS AND AS A PERCENTAGE OF THE TOTAL POPULATION SAMPLE.

Favourite Form	N	*SOGS (≥ 5)*	
		% base N (Gaming Machine Players)	% base N_1* (Population Sample)
Gaming Machines 1995	34	29.4	0.72
Gaming Machines 1997	57	22.9	1.08

(* total population sample 1995 N_1 = 1390; 1997 N_1 = 1209)

In the context of the increase over the last two years in the proportion of the population who regularly play gaming machines it seems that recently recruited players may be "buffered" from experiencing gambling related problems compared with players of lesser experience. Whether this buffering is a permanent feature of their play or becomes eroded over time will be an important question for future surveys to address.

In 1995 given the very small proportion of LOTTO ONLY group who scored in the *at risk* categories, no correction was made in the calculation of prevalence. However, in 1997 with more than double the proportion (4.4% as opposed to 2.1% in 1995) scoring in the *at risk* category, prevalence estimates were recomputed and a correction made for the missing LOTTO ONLY players, i.e. those eligible but not included in Stage 2 of the Interview (see Section 4.2, page 10).

These adjusted frequencies are given in Table 31 below. The prevalence figures (based on the corrected frequencies) given for both 1995 and 1997 show a small increase of .05% (Table 32). The rise of 7,850 in the total population of regular weekly gamblers *at risk* of significant gambling related problems is a rise of 14%. It must be noted that 9.6% of this is attributable to the intervening rise in the adult population in New South Wales. The conclusion supported by the results from the SOGS is that during the period 1995-1997 there was a small rise in the total population *at risk* of approximately 2,500 people. This rise is mainly attributable to the increase in *at risk* LOTTO ONLY players.

TABLE 31: CORRECTING THE NUMBER OF RESPONDENTS BY SOGS CATEGORY FOR 'MISSING' LOTTO ONLY

	Respondents by Category				Corrected Estimates By Category*			
	1995		1997		1995		1997	
SOGS Score	LOTTO ONLY	OTHER	LOTTO ONLY	OTHER	LOTTO ONLY	OTHER	LOTTO ONLY	OTHER
10 +	1	6	1	3	2.6	6	2.5	3
7 - 9	0	11	0	13	0	11	0	13
5 - 6	2	11	4	9	5.3	11	10	9

*Basis for correction of LOTTO ONLY group;

- 1995 N=140 of 369 eligible
- 1997 N=113 of 282 eligible

TABLE 32: SOGS CATEGORIES FOR CORRECTED ESTIMATES OF THOSE *AT RISK* OF SEVERE GAMBLING RELATED PROBLEMS.

SOGS Score	Corrected N		Accuracy Risk Factor	Prevalence %		Population *at risk*	
	1995	**1997**		1995	**1997**	1995	**1997**
10 +	8.6	**5.5**	1	0.62	**0.45**	27,900	**22,200**
7 - 9	11.0	**13.0**	.5	0.40	**0.54**	18,000	**26,600**
5 - 6	16.3	**19.0**	.2	0.23	**0.31**	10,350	**15,300**
Totals for Prevalence and Population at *risk*				**1.25**	**1.30**	**56,250**	**64,100**

1995 N=1390; 1997 N=1209

* 1995 - Adult Population New South Wales 4,500,000
1997 - Adult Population New South Wales 4,930,000

TABLE 33: PROPORTION OF THE GENERAL POPULATON OF ADULTS SCORING IN THE *AT RISK* CATEGORIES (ABOVE THE US AND AUSTRALIAN CUT-OFFS) ON THE SOGS

SOGS SCORE	*WA 1994*	*TAS 1994 Revised*	*TAS 1996*	*SA 1996*	*NSW 1995 Revised*	***NSW 1997 Revised***
≥5	0.56	0.98	2.60	1.21	2.59	**2.89**
≥10	0.32	0.16	0.24	0.31	0.57	**0.41**

Table 34 (page 67) summarises comparisons with similar studies using the SOGS in other States in Australia.

TABLE 34: PERCENTAGE DISTRIBUTION OF SOGS SCORES FOR REGULAR GAMBLERS BY US AND AUSTRALIAN CRITERION FOR IDENTIFYING *AT RISK* CASES

	SOGS SCORE	*WA 1994 (204)*	*TAS 1994 (295)*	*TAS 1996 (477)*	*SA 1996 (381)*	*NSW 1995 (299)*	***NSW 1997 (288)***
US Criterion (No Problem)	0-2	91.7	94.2	85.7	#	75.3	**72.2**
US Criterion (Possible Problem Gambler)	3-4	2.9	4.1	8.8	#	14.3	**17.4**
US Criterion (Probable Pathological Gambler)	≥5	3.4	1.0	5.6	0.9	8.1	**12.5**
Australian Criterion	≥10	2.0	0.7	0.6	0.31	2.3	**1.7**

Figure unavailable

Note: TAS 1996 and New South Wales 1997 figures include correction for LOTTO ONLY players eligible but not included in sample.

8.2 Profile of Players *At risk*

The *at risk* gamblers in the sample are those who scored 5 and above on the SOGS. Of these heavier gamblers, 80% were involved in playing cards for money, 76% in on-course totalisator betting, 52% off-course TAB, 76% with bookmakers, 28% club gaming machines, 56% hotel gaming machines, 72% casino gaming machines and 76% casino table gaming. (These categories are not mutually exclusive). Table 35 below shows the favourite form for these respondents.

TABLE 35: *AT RISK* GAMBLERS PERCENTAGE DISTRIBUTION ON FAVOURITE FORM FOR LOTTO ONLY AND OTHER

	% (n=30)
Lottery/Pools/Bingo	4
Racing	28
Gaming machines (excluding Casino)	52
Casino (all forms)	4
Can't Say	12

An overview of the characteristics of *at risk* gamblers follows:

SPEND PER SESSION

- 13% spend more than $500 in a single session
- 30% spend between $100 and $500
- 17% spend between $70 and $100
- 23% spend between $40 and $70
- 10% spend between $20 and $40
- 7% spend below $20

AREA

- 64% were from the Sydney metropolitan area
- 36% were from New South Wales country areas

GENDER

- 49% were males
- 51% were females

AGE

- 13% were aged 18-24 years
- 40% were aged 25-34 years
- 24% were aged 35-44 years
- 10% were aged 45-54
- 13% were aged 55 years and over

PERSONAL STATUS

- 57% were partnered
- 43% were single

OCCUPATIONAL STATUS

- 44% were fully employed
- 16% were employed part-time
- 12% were students
- 4% were retired
- 16% did household duties
- 8% were looking for work

ANNUAL PERSONAL INCOME

- 30% earned less than $10,000
- 17% earned between $10,001 and $20,000
- 20% earned between $20,001 and $30,000
- 7% earned between $30,001 and $40,000
- 13% earned between $80,001 and $90,000
- 6% earned $100,000 or more
- 7% can't say/refused

OCCUPATION

- 26% Semi-Skilled Worker
- 23% Skilled Manual Worker
- 10% Clerk/Typist
- 7% Unskilled
- 6% Sales
- 7% Small Business Owner
- 4% Semi-Professional
- 3% Manager/Large Business owner
- 7% Unclassifiable
- 7% No answer

EDUCATION LEVEL ATTAINED

- 7% Completed or attended Primary School only
- 60% Completed or attended Secondary School only
- 30% Completed or attended Tertiary Level only
- 3% Can't say/refused

ENGLISH AS MAIN LANGUAGE

- 53% spoke English as their main language
- 40% spoke another main language
- 7% declined to answer

ABORIGINAL/TORRES STRAIT ISLANDERS

- 10% identified as Aboriginal or Torres Strait Islanders
- 90% did not

9. EVALUATING THE SOCIAL AND ECONOMIC IMPACTS OF GAMBLING RELATED PROBLEMS

Section 9 contains:

TABLES

In the following section the areas of gambling related problems,

- Work-related
- Legal
- Family & Individual
- Financial

are considered in turn. Each section is in two parts.

- **The first part provides a description of the range of negative impacts**

The approach adopted has been to use the summary statistics from the Clinic Sample (clinical case databases of project team members (e.g. *Pathological Gambling and Criminal Behaviour,* 1992), and those used in validating the SOGS in this survey, together with the negative impacts reported by respondents to the survey items.

- **Economic impact costings - approach**

The survey undertaken in this study, and the results from clinical case databases of project team members reveal a wide range of economic and social impacts associated with problem gamblers.

We have undertaken indicative costings for some of these impacts, where they are amenable to quantification. The following principles were used in undertaking these costings:

- the cost of impacts is undertaken from a community perspective. Personal costs, which involve a transfer of money between different sectors of the economy, without impinging on economic activity (such as the stock of debts owed by gamblers), are not included in these costings

- prevalence was estimated either from the survey results or, where more appropriate, from the clinical databases available

- responses to survey questions were grouped and directly linked to impacts where appropriate

- the team's professional judgment was used to decide whether the survey results or incidence from clinical data bases were used as the basis for costings (see detailed assumptions for each impact)

- where the incidence for an impact has been taken from the survey results, the two surveys (1995 and 1997) have been combined. This has been done since the incidence for a number of impacts is low (often in the range 1-10 for each survey), so by effectively averaging the incidence across the two surveys, we should reduce any survey bias. (This assumes that the two surveys are independently random, which they are , even allowing for the fact that the surveys were conducted in the same region).

By combining the survey results in this way, we are precluding a direct comparison of the economic impacts costings between the two surveys. Given the indicative nature of the costings being undertaken, we feel it would not be wise to make such a direct comparison since it could be misinterpreted as showing that the economic costs had changed significantly, when in reality the differences across surveys could be within the expected "errors" in the estimations. Combining the surveys gives a better dataset on which to base the economic costings, so this improved dataset has been used in this report.

- the incidence of each impact was converted to annual cases per annum for the New South Wales adult population as follows:

- the survey incidence for the LOTTO ONLY group was scaled up to reflect the non-interviewed (Stage 2) section of that group. It was assumed that the same prevalence rate applied as in the interviewed section of the group.

- for survey results a scaling factor was then applied between the sample and the New South Wales adult population (i.e. assuming a random sample).

- for the clinical data base results, which essentially reflect an incidence among the core of problem gamblers (SOGS score 10 or more), a scaling up of the incidence was undertaken to account for some occurrence of the impact in problem gamblers outside this core. 50% of those people in the SOGS score 7-9 range, as revealed by the survey, were incorporated into the prevalence assumptions.

- in effect this means that our costings using the clinical databases assume that a maximum prevalence for each impact is set at 0.85% of the adult population in New South Wales. The 20% incidence in the SOGS 5-6 group, identified as '*at risk*' by the study, have been excluded from the costing analysis. Therefore, our

costing results are likely to be on the conservative side. The actual prevalence at or below this level depends on the database results for each individual impact.

- an annualising factor was estimated for each impact to convert the cases to a per year figure. This factor varied by impact (see detailed assumptions). Although some survey questions (in the 1995 survey) were prefaced with a "in the last six months", we do not believe that the responses were confined to this period. In the 1997 survey, this was altered, for negative impact questions which do not feed into the SOGS scoring system, to occurrence "at any time". There is a need for varying factors to annualise the reported incidence in either the surveys or the clinical databases; for the latter, reported cases are for an occurrence during the period of each problem gambling case for which the average duration is 10 years.

- costing assumptions were then sourced or estimated for each impact and applied to the prevalence data (see detailed impact assumptions below). It should be added that we have erred on the side of conservatism in our costing assumptions, where data on which to base assumptions has not been readily available.

- the monetary values used in assumptions for, and derivation of, the costing of impacts is based in 1996-97 prices – the mid year between the two survey years (1995-96 and 1997-98)

9.1 Impacts on Employment

9.1.1 Types and Range of Impacts:

From the survey:

Few players, even from the OTHER group, reported negative impacts that impinge on work productivity. Where this did occur it was not on a regular or frequent basis.

Loss of work efficiency and lost time from work[1] in the last six months is reported by 5.1% (1997) compared to 13.8% (1995) of those in the OTHER group, but typically only 'rarely' or 'sometimes'.

Changing work or being fired because of gambling related problems in the last six months was reported by less than 1% (1997) compared to 5% (1995) of the OTHER group.

[1] Figure contains 1 student who lost time from study

From the Clinic Group:

68% report interference with productivity and 28% resignation or termination of a job because of their gambling. These clients describe prolonged absences from work while gambling and reduced efficiency because of poor concentration or financial worries. Termination of a job may be to avoid the detection of a crime involving misappropriation of monies or goods from work.

9.1.2. Economic Costing of Work Related Impacts

TABLE 36: PRODUCTIVITY LOSSES - PREVALENCE

Productivity loss impact in New South Wales	Survey prevalence out of 2599	Database prevalence of SOGS 10+	Which used	Annualise factor	Cases per year in New South Wales	% New South Wales population p.a.	% of problem gamblers p.a.
Cases	23	68%	Survey	1	26472	0.6%	66%

Assumptions used in costing of this impact:

- % of work time lost 2.5%
- Average full time earnings $31,424 p.a.
- % of adults in paid work 65%

Impact costing: Productivity loss **$20.796 million**

Key points:

- efficiency loss affects an estimated 66% of problem gamblers per annum (such gamblers as defined at 0.85%, or 39,117, of the New South Wales adult population)
- the assumptions for the average earnings and percentage in work or home duties were sourced from the survey and ABS data
- assuming an efficiency loss for the affected problem gamblers of 1 hour a week, the productivity loss is estimated at almost $21 million per annum (in 1996-97 prices). Clearly the size of this cost is critically dependent on the assumption for average time lost at work.

9.1.3 Job Change Costs

TABLE 37: JOB CHANGE COSTS - PREVALENCE

Job change impact impact in New South Wales	Survey prevalence out of 2599	Database prevalence of SOGS 10+	Which used	Annualise factor	Cases per year in New South Wales	% New South Wales population p.a.	% of problem gamblers p.a.
Cases	7	28%	Survey	5	2,479	0.06%	6%

Assumptions used in costing of this impact:

- Average cost of job change $2,357
- % to employment 90%
- % to unemployment 10%
- Duration of unemployment 1 year
- Unemployment benefit $9,761 p.a.

Impact costing: Annual Total Job change cost **$7.678 million**

Key points:

- job change affects an estimated 6% of problem gamblers per annum. Ten percent are assumed to become unemployed for an average duration of 1 year. This is confirmed by the clinical database results and fits intuitively with an unemployment rate amongst problem gamblers of slightly higher than the national average

- the average job change cost is assumed to be 7.5% of average earnings, approximately half of the cost reported by major job search firms

- the job change cost is estimated at $7.7 million p.a (in 1996-97 prices). This comprises $5.3 million in job search costs and $2.4 million in additional unemployment benefit.

9.2 Impacts with Legal and Related Costs

Legally related negative impacts were reported very infrequently in 1995 (4%) and even less frequently in 1997, with just 0.6% of the OTHER group reporting a court appearance in the last six months because of charges related to their gambling. In 1997, 5.1% of the OTHER group reported 'borrowing money' without permission in order to gamble compared to approximately 4% in 1995.

9.2.1 Types and range of impacts

From the Survey

Legally related impacts are reported very infrequently. In 1995, 4% of the OTHER group reported a court appearance in the last six months because of charges related to their gambling, compared to .6% in 1997. Respondents from the OTHER group also reported borrowing money without permission to gamble; 3.8% in 1995 compared to 5.1% in 1997.

From the Clinic Group

60% of clients report committing a gambling related offence. 25% of clients are charged and about half, i.e. 12%, receive a custodial sentence of 1-2 years duration.

9.2.2 Economic Costing of Legal System Impacts

TABLE 38: LEGAL SYSTEM IMPACTS - PREVALENCE

Legal costs impact in New South Wales	Survey prevalence out of 2599	Database prevalence of SOGS 10+	Which used	Annualise factor	Cases per year in New South Wales	% New South Wales population p.a.	% of problem gamblers p.a.
Court cases	10	20%	Database	10	815	0.02%	2%
Prison cases	4	10%	Database	30	136	0.003%	0.3%
Police cases	6	60%	Database	5	4,887	0.1%	12%

Assumptions used in costing of these impacts:

- Average court case cost $6,600
- Average prison stay cost $49,000 p.a.
- Average prison sentence 1.5 years
- Average police case time $510 per case

Impact costing:	Annual court case cost	$5.376 million
	Annual prison cost	$9.978 million
	Annual police costs	$2.492 million
	Total legal impact costs	**$17.846 million**

Key points:

- the survey prevalence results are from single items and likely to have significant standard errors. We therefore used the prevalence in the clinical databases. Prevalence amongst problem gamblers ranges from 60% experiencing cases involving the police to 10% going to prison.

- the annualising factors have been assumed to be relatively long for legal case impacts, depending on the severity of the offence. On an annualised basis, the incidence amongst problem gamblers is low, ranging from 0.3% for prison cases to 12% for police involvement.

- average prison, court and police time costs have been sourced from industry estimates.

- the legal system costs are significant, totalling an estimated $17.8 million per annum (1996-97 prices) in New South Wales.

9.3 Impacts on the Family and Individual

9.3.1 Type and Range of Impacts

From the Survey:

In the OTHER group the most common negative impacts refer to expecting to win at each gambling session, dysphoric mood, chasing losses, over-expenditure on gambling and the belief that gambling, for the respondent, was problematic and out of control (Table 23).

These kinds of impacts are the most frequently reported experience by up to 2 in 5 people who on a weekly or more frequent basis play a continuous form of gaming or wagering.

Impacts on the family are reported less frequently than impacts experienced by the individual but nonetheless they are substantial. For example, during both 1995 and 1997 surveys almost 1 in 5 in the OTHER group reported experiencing arguments about money because of their gambling. For 2.3% of the OTHER group their gambling had caused the break-up of a relationship.

In addition, 12% (1997) compared to 15% (1995) of respondents had been aware of problems for a family member arising from excessive gambling; during both years around one-third of respondents reported these problems as current, that is, they had occurred within the last 6 months.

From the Clinic Group:

50% of the client problem gamblers were described as having a significant level of marital dysfunction requiring counseling/therapy. Partners of problem gamblers are at significant risk of stress-related illness; affecting 40% of partners. Of course these problem may have arisen with the partners even if there were no gambling problems, and a proportion may be attributed to the partners themselves.

9.3.2 Economic Costing of Impacts on Family & Individual

Most of the family related impacts mentioned are not amenable to even indicative costing, since their valuation would have to be based on highly subjective and variable factors.

Family marital problems, which do have a significant incidence reported amongst problem gamblers, would lead to counseling in a large number of cases. However, the project team has assumed that such counseling would be referred to gambling specific treatment and therefore these costs are included in the Gambling Service Costs detailed later in the report.

Two family and individual impacts have been costed - the costs of divorce proceedings and acute treatment costs.

TABLE 39: FAMILY AND INDIVIDUAL IMPACTS - PREVALENCE

Family costs impact in New South Wales	Survey prevalence out of 2599	Database prevalence of SOGS 10+	Which used	Annualise factor	Cases per year in New South Wales	% New South Wales population p.a.	% of problem gamblers p.a.
Divorce cases	n.a.	7%	Database	20	143	0.003%	0.4%
Acute treatment cases	n.a.	9%	Database	20	173	0.004%	0.4%

Assumptions used in costing of these impacts:

- Average divorce case cost $2,040 per case
- Average acute treatment cost $2,550 per case

Impact costing:	Annual divorce case cost	$291,000
	Annual acute treatment cost	$441,000
	Total family impact costs	**$732,000**

Key points:

- divorce and acute treatment affects an estimated 7% and 9% of problem gamblers, but this has been spread over a 20 year time frame in annualising the impact, since they are, generally, once only experiences.

- the acute treatment incidence is based on reported suicide attempts in the clinical database sample.

- industry consultations suggest divorce costs range from a minimum $300 upwards depending on whether court action is required. On the basis of the court case assumption used in the legal costings, adjusted for the fact that a high share of divorces do not involve a court case, we have assumed a $2,040 average costs.

- the acute treatment average cost assumption has been sourced from Health Department casemix costings.

- the family impact costs are estimated at $0.7 million p.a. Whilst this is a relatively low amount, it should be remembered that a wide range of other family impacts have not been costed.

9.4 Financial Impacts on the Individual and Family

9.4.1. Type and Range of Impacts

From the Survey

Twenty-eight percent of respondents in the OTHER group reported spending more than they could afford at least some of the time during the last 6 months. Gambling debts repaid by family or friends was reported by only 2-3% of OTHERS in 1995. In 1997 this figure rose to 8-9%.

From the Clinic Group

Maximum stakes range from $10-$50,000; debts at the time of help-seeking, range from $150-$240,000 (excluding those with debts over $1 million). Debts are owed to family (36%), major finance companies (37%), and credit cards (28%). Categories are not mutually exclusive.

9.4.2 Economic Costing of Financial Impacts

An indicative costing of bankruptcies has been attempted. According to the Attorney General's report on the 1986 Bankruptcy Legislation, approximately 1% of bankruptcies can be assigned to a gambling or related cause.

According to ABS statistics, some 1,000 business and personal bankruptcies occur in New South Wales each year. Hence an average of 10 can be assigned to gambling causes.

No data are available for the average cost of bankruptcy. We have assumed an average cost of $6,600 per case, using the court case assumption sourced from market data.

The total cost of bankruptcies, under these assumptions, attributable to gambling is estimated at $66,000 p.a. in New South Wales.

The 1997 survey asked a specific question in relation to bankruptcy being caused by gambling debts. Three respondents out of 1,209 said this had occurred to them. If this incidence were applied across the New South Wales population (on a household basis, since bankruptcy is household specific rather that person specific), the number of annual bankruptcies attributable to gambling debts would be 75, rather than the 10 derived from the data above (i.e. about 7.5% of annual bankruptcies have gambling debts as their cause). The cost impact of this would be $495,000 per annum (rather than $66,000 p.a. above). To again err on the side of conservative costing estimates, we have assumed that the incidence in the 1997 survey is an overestimate (i.e. a skewed sample for this impact) and have used the much lower $66,000 p.a. figure.

10. COSTING EXISTING SERVICES

Section 10 contains:

TABLES

The report prepared by Keys Young in Study 1 (1995), which identified existing services provided for problem gamblers and their families, has been used as the basis for costing of existing services. They have been revised to reflect the1996-97 base for monetary costings used in this study. These are summarised in the table below. In addition we have added the funding allocations from the Casino Community Benefit Fund for 1996-97 (Source: Department of Gaming and Racing – Communication May 1998).

TABLE 40: SERVICES PROVIDED FOR PROBLEM GAMBLERS AND THEIR FAMILIES

Gambling service type	**Examples**	**Service costs $ 000**
Public missions etc.	Wesley Mission; Centacare; Odyssey House	1,335
Other publicly funded	Public hospitals; Regional centres	378
Private hospitals	St. John of God; St. Edmunds; South Pacific	536
Other private treatment	Private consultants	73
CCBT Fund Project Funding	Wesley Mission, Centacare and many other services funded.	869
Total		**3,191**

Key points:

- the estimated costings reflect not only the public funding of such services but the total cost of provision (except in the other public funded category).

- for other private treatment, we have assumed a total of five practitioners in NSW, (two are in the project team), dealing with private patients for an average of 6 hours each per week, at an average fee rate of $50 per hour.

- the projects funded by the CCBT Fund include both services for problem gamblers and in some cases research undertaken into problem gambling.

- the estimated cost of provision of existing services in NSW is $3.2 million in 1996-97. This does not, of course, reflect any additional services which may be provided in the future. As with public treatment, access is a very important factor in the use

of these services. Where they are available and publicised they are used. The corollary is that there is latent demand for these services where they do not exist.

11. SUMMARY OF IMPACTS COSTED

Section 11 contains:

TABLES

The following table summarises the economic and social effect of gambling in NSW, as costed in this study.

TABLE 41: SUMMARY OF THE ECONOMIC AND SOCIAL EFFECT OF GAMBLING IN NSW

Impact in NSW	Estimated annual cost
	$ 000
Employment impacts	**28,474**
- Productivity loss	20,796
- Job change	5,258
- Unemployment	2,420
Legal Costs	**17,846**
- Court costs	5,376
- Prison costs	9,978
- Police costs	2,492
Financial costs	**66**
- Bankruptcy costs	66
Personal costs	**732**
- Divorce	391
- Acute treatment	441
Existing services	**3,191**
Total	**50,309**

In summary:

- the impacts resulting from problem gambling valued in this study are estimated to cost the NSW community $50 million per annum (in 1996-97 prices). This represents a cost of around $11 per head of the adult population in NSW.

- the costing of the impacts, in total, has not varied significantly between the two surveys. The impacts costed in the 1995 report also amounted to around $50 million (adjusted to 1996-97 prices). A marginally lower quantified impact in real terms in the 1997 survey, due to a generally slightly lower incidence of negative impacts, was offset by the increased services funded (due to the CCBT funding coming on stream).

Overall it cannot be concluded that there has been a change between the surveys in the costs associated with the impacts valued – with the $50 million per annum being estimated as the indicative impact costing across both surveys.

- the annual cost of $50 million per year represents an estimated 1.3% of the output (net expenditure) generated directly by the sector in NSW.

- the main cost impacts are work related and legal system costs, which together represent over 90% of the total quantified impacts.

- this estimate could well be regarded as low given the conservative costing assumptions used and the range of impacts not costed, e.g. where family members have used savings, sold property to pay gambling debts, refund monies misappropriated etc.

12. CRITICAL APPRAISAL OF THE KEY FINDINGS 1995-1997

Section 12 contains:

TABLES

The measurement of the social and economic impacts of gambling is a relatively new and developing research domain. As in most empirical research there is a need to compare and contrast data streams arising from different sources. Where the impacts are as diverse and complex as those generated by gambling this may be the only way of building a balanced, reliable and valid picture. Survey results relating to problem gambling can be usefully reviewed in the context of how the picture has changed in terms of the per capita expenditure on gambling and related changes in the availability of existing and new gambling products.

In this section of the report the key results from the survey are evaluated in the context of information derived independently from other sources, namely the Australian Gambling Statistics and from the Department of Gaming and Racing.

The two main findings of this 1997 study, compared with 1995 are:

- that there has been a small increase in the prevalence of the *at risk* player who participates weekly in a gambling activity.

- that the economic costs of the impacts arising from gambling have remained relatively unchanged.

TABLE 42: PREVALENCE AND POPULATION *AT RISK* OF SIGNIFICANT GAMBLING RELATED PROBLEMS 1995- 1997 (TAKEN FROM TABLE 32, PAGE 66)

SOGS Score	% Prevalence		Population *at risk* N	
	1995	**1997**	1995	**1997**
10+	0.62	**0.45**	27,900	**22,200**
7 - 9	0.40	**0.54**	18,000	**26,600**
5 - 6	0.23	**0.31**	10,350	**15,300**
Totals	1.25	**1.30**	56,250	**64,100**

TABLE 43: SUMMARY OF IMPACTS COSTED; 1995 AND 1997

Impact in NSW	Estimated Annual Cost *$'000*	
	1995	**1997**
Employment Impacts	27,834	**28,474**
Legal Costs	17,139	**17,846**
Financial Costs	65	**66**
Personal Costs	755	**732**
Existing Services	2,277	**3,191**
Total	48,070	**50,309**

These key findings are summarised once again at Tables 42 and 43. Before considering these results in the context of the increased availability of some forms of lawful gambling between 1995 and 1997 it must be noted that in part the increased number of those *at risk* is caused by a 9.6% rise in the adult population of NSW between the two time periods of 1995 and 1997 surveys. In Table 42, the rise in the total population *at risk* is 14% i.e. in 1997 the actual small increase in prevalence of *at risk* gamblers results in a 4.4% increase in the total population *at risk* in 1995.

TABLE 44: CHANGES IN THE AVAILABILITY OF SOME FORMS OF LAWFUL GAMBLING; JUNE 1995 - SEPTEMBER 1997

Form/ Product	*Increase (1995 - 1997)*	***1997 Total***
Sydney Casino		
table games	150	**150**
gaming machines	500	**500**
Registered Clubs		
gaming machines	3,877	**66,209**
Hotels		
gaming machines	8,687	**20,296**
Registered Clubs Offering Keno	199	**933**

New South Wales Lotteries Products; new products include Lotto Strike and Powerball

Bookmakers; sports bookmakers new since 1995

The increased availability of some forms of gambling during the period from June 1995 - September 1997 summarised at Table 44 was associated with an increase in the estimated per capita expenditure on gambling in New South Wales provided in the Australian Gambling Statistics (1996-1997);

1993-1994	$646 per capita, per annum
1996-1997	$858 per capita, per annum

Availability of lawful forms of gambling, increases in availability of different forms, and increases in per capita expenditure on gambling are all assumed to be associated with increases in problem gambling. Contemporary reviews of studies completed in North America and New Zealand as well as in other jurisdictions in Australia provides some, but not unequivocal support for such an expectation (Dickerson, McMillen, Hallebone, Volberg & Woolley, 1997).

The survey in 1997 showed an increase in gambling expenditure and an increase in the proportion of regular weekly or more frequent players of gaming machines. There was also a significant increase in the proportion of women who nominated gaming machines as their favourite form of gambling.

These results are compatible with the changes in the availability of forms of gambling and expenditure levels described above in Table 45 and from the Australian Gambling Statistics; they provide confirmation of the validity of the survey methodology in tracking what has changed from the respondents' (players') perspective over the two year period.

In this overall context the small measured rise (4.4%) in the population of *at risk* gamblers may well be accurate and valid and parallels the small increase in the economic costs arising from problem gambling.

The 1995 study was scheduled to immediately precede the opening of the temporary Sydney casino with a view to establishing its impact on problem gambling. The 1997 study revealed 1.1% of respondents who reported participating in casino gambling on a monthly basis and only two respondents with a weekly or more frequent participation.

These participation rates are very much smaller than the 9.9% who play gaming machines weekly and the 3.5% whose favourite form of gambling each week is racing (betting with a bookmaker, at the TAB or with the on-course totalizator). If it is assumed that the same proportion of weekly casino players score in the *at risk* category on the SOGS as players of these two more popular forms of gambling (i.e. about 1 in 5). Then from the participation rates alone it can be concluded that the Sydney casino may have made a small proportional

increase in problem gambling in New South Wales between 1995 and 1997. The small sample of weekly players at the casino does not permit this to be estimated.

In accounting for the small measured increase from 1995 to 1997 in the proportion of the community who scored in the *at risk* category on the SOGS, the greater proportion can be attributed to the LOTTO ONLY players, with a smaller proportion associated with weekly gaming machine players and possibly casino players. In regard to both the LOTTO ONLY and gaming machine players the increase in those who score in the *at risk* category is mainly attributable to more women players reporting gambling related problems in 1997 compared with 1995.

12.1 Future assessment of problem gambling in New South Wales

In a report to the Victorian Casino and Gaming Authority (Dickerson, McMillen, Hallebone, Volberg & Woolley, 1997) it was recommended that the definition of problem gambling be couched in terms of the harm that could arise from a player's gambling which could impact on the player, their family and may extend into the community.

The measurement of that harm it was suggested was best achieved in the short term (3-5 years) by combining the following data streams:

- A survey of community patterns of gambling including the SOGS questions (i.e. a similar method to that employed in this project).
- ABS data on the proportion of available disposable income spent on gambling.
- Australian Gambling Statistics, e.g. per capita expenditure
- Changes in the availability of commercial gambling products
- Annual presentation rates of clients to problem gambling services.

In the longer term the report went on to recommend that additional methods of measuring harm arising from gambling needed to be developed. As harmful impacts vary greatly from one cultural context to another, measures sensitive to cultural diversity are a prerequisite for the elaboration of a full and balanced picture of problem gambling in a jurisdiction.

The CCBF is currently funding a major sequence of studies focussing on this issue as well as research examining the participation in gambling of New South Wales residents aged under 18 years of age.

In New South Wales the main missing set of data from both 1995 and 1997 studies is that describing the rate of presentation of clients to services. Although a useful ad hoc baseline

dataset was established by Walker (1997) there is a need for funded services to collect and collate a standard minimum database as is the practice in Queensland and Victoria.

Such a data set collected state-wide throughout New South Wales would:

- make a contribution to evaluating the overall level of problem gambling in the state
- provide a basis for describing and understanding regional differences
- provide a more broad-based and reliable estimate of the extent and degree of the negative impacts for inclusion in the costing exercise.

Finally, the accurate estimation of the gambling related costs of the negative impacts arising from problem gambling may require that these costs be estimated at the point at which they occur. Thus, as Nadler (1985) recommended, courts, prisons, mental health services and other institutions and organisations may themselves need to estimate the extent to which problem gambling features in the population they serve.

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APPENDIX 1

DEMOGRAPHICS OF REGULAR GAMBLERS 1997

	LOTTO ONLY N=113	OTHER N=175	SOGS Scores 5+ N=30	SOGS Scores 10+ N=4
SEX	%	%	%	%
Male	50	59	63	75
Female	50	41	34	25
AGE				
18-24	6	14	13	0
25-34	21	22	40	0
35-44	23	22	23	50
45-54	20	16	10	0
55-64	15	12	13	50
65+	14	14	0	0
MARITAL STATUS				
Partnered	68	53	57	75
Single	40	47	43	25
EDUCATIONAL LEVEL				
Primary	4	3	7	25
Secondary	67	56	60	50
Tertiary	42	39	30	25
WORK STATUS				
Full time-worker	43	39	40	75
Part-time worker	17	17	16	0
Retired/Non Worker	26	28	13	0
Home Duties	14	11	10	25
Student	0	5	20	0

DEMOGRAPHICS OF REGULAR GAMBLERS 1997

	LOTTO ONLY N=113	OTHER N=175	SOGS Scores 5+ N=30	SOGS Scores 10+ N=4
INCOME				
<$10,000	27	29	30	0
$10,001-$19,999	16	21	17	25
$20,00-$20,999	16	19	20	75
$30,000-$30,999	16	9	7	0
$40,000-$40,999	11	9	13	0
$50,000-$59,999	1	4	0	0
>$60,000	4	4	7	0
No Answer	10	5	7	0
OCCUPATION				
Professional /Semi Prof	10	5	5	0
Managers/Business Owners	15	9	14	0
Trades /Skilled & Unskilled	39	41	57	100
Clerical/sales	36	31	24	0
ATSI				
Yes	3	3	10	25
No	97	97	90	75
NESB				
Yes	14	14	40	50
No	86	86	60	50

APPENDIX 2

The South Oaks Gambling Screen (SOGS) (Lesieur & Blume,1987)

The SOGS is the only internationally established measure validated against the Diagnostic and Statistical Manual (edition III-R) (American Psychiatric Association, 1987), diagnosis of 'pathological gambling'. This measure was included in the in-depth section of the interview given only to the regular gamblers. The SOGS consists of 13 items based on a ratio scale with forced choice answers to each item and with scores determined by adding up the items. A score of 0-2 indicates no problem with gambling, 3-4 indicates possible problematic gambling and a score of 5 or more indicates probable pathological gambling (out of a possible 20 points). Whilst there has been criticism of the heterogenous nature of this instrument as well as the hazardous nature of using 'cut-off' points to identify 'cases' of pathological gambling (Dickerson, 1991), this study used both the conventional SOGS scoring system (for comparisons with previous research in the US and NZ), and the SOGS as a continuous measure by employing a 5 point scale (1=never; 2 = rarely; 3=sometimes; 4=often; 5=always). This is preferable on psychometric grounds and it was envisaged that the measure would allow determination of degrees of excessive behaviour experienced by the gambler.