

2010

'Mobile mindsets': EGM venue usage, gambling participation, and problem gambling among three itinerant groups on the Sunshine Coast of Australia

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Publication details

Pre-print of: Doran, B & Young, M 2010, 'Mobile mindsets': EGM venue usage, gambling participation, and problem gambling among three itinerant groups on the Sunshine Coast of Australia', *International Gambling Studies*, vol. 10, no. 3, pp. 269-288.

Published version available from:

<http://dx.doi.org/10.1080/14459795.2010.531040>



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Journal:	<i>International Gambling Studies</i>
Manuscript ID:	Draft
Manuscript Type:	Empirical Research
Keywords:	geography, gambling, problem gambling, recreation, electronic gaming machines

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ABSTRACT

Mobile populations form an increasingly important part of many communities yet tend to be neglected by problem gambling prevalence research. We explore relationships between problem gambling and the ways in which mobile subgroups use gambling venues. Adopting a combination of quantitative and qualitative techniques, we conduct an exploratory examination of three subgroups - construction workers, 'grey nomads', and 'southerner' tourists on the Sunshine Coast of Queensland, Australia. The groups displayed substantial differences in venue visitation, gambling behaviour and problem gambling risk. The group with the least discretionary mobility, the construction workers, were most heavily dependent on gambling venues for economic and social relationships. This translated into higher levels of problem gambling risk, which was further mediated by the inter-personal connectedness of individuals. These results suggest that mobility per se does not directly result in higher risk of problem gambling but combinations with social isolation to place individuals at risk.

Introduction

Problem gambling is a significant public health concern throughout the western world (Abbott, Volberg, & Rönnerberg, 2004; Collins & Barr, 2006; Cox, Yu, Afifi, & Ladouceur, 2005; Volberg, Abbott, Rönnerberg, & Munck, 2001; Wardle et al., 2007; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2002). Australia in particular has displayed considerable concern over this health risk with most jurisdictions conducting problem gambling prevalence surveys to measure the estimated level and risk factors for problem gambling (AC Nielsen, 2007; Gill, Dal Grande, & Taylor, 2006; J McMillen, Marshall, Ahmed, & Wenzel, 2004; Productivity Commission, 1999; Roy Morgan Research, 2006; Schofield, Mummery, Wang, & Dickson, 2004; Young, Stevens, & Morris, 2008). However, surveys of this nature are generally based on Computer Assisted Telephone Interview (CATI) techniques that use random digit dialling to landlines in regions of interest (e.g. AC Nielsen 2007; Roy Morgan Research, 2006; Queensland Government, 2005; Young et al., 2008). This means that they under-represent or entirely miss mobile sub-populations that do not have access to landlines such as tourists or mobile workers. Given that society is becoming increasingly mobile (Urry, 2002), more research needs to be conducted on the gambling behaviour and vulnerability to problem gambling of mobile subgroups in the population. As a first step, we conducted a series of quantitative surveys and qualitative interviews with three itinerant groups (i.e. construction workers, 'grey nomad' tourists, and 'southerner' tourists) on the Sunshine Coast of Queensland, Australia. Our intent was to explore the relationships between mobile groups, gambling venues and problem gambling (as measured by the CPGI). In this paper, we describe the ways in which these three groups interact with local gambling venues, concentrating on their usage of venues, their associated gambling behaviour, and vulnerability to problem gambling.

Mobility and gambling behaviour

In terms of the geographic determinants of problem gambling, previous research has identified multiple causes, both internal (e.g. personality, biochemistry, psychological processes) (Blaszczynski & Nower, 2002; Delfabbro, Lahn, & Grabosky, 2006; Raylu & Oei, 2002; Westphal & Johnson, 2000) and external, including social context (Hing & Breen, 2001), age (McKay, 2005; McNeilly & Burke, 2000; Olason, Skarphedinsson, Jonsdottir, Mikaelsson, & Gretarsson, 2006), gender (Blanco, Hasin,

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Petry, Stinson, & Grant, 2006; Boughton & Falenchuk, 2007; Clarke et al., 2006), ethnicity (Clarke et al., 2006; Morrison, 2004; Young, Barnes, Stevens, Paterson, & Morris, 2007), socioeconomic position (Clarke et al., 2006; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2004; Welte, Wieczorek, Barnes, & Tidwell, 2006), availability of gambling opportunities (Jacques, Ladouceur, & Ferland, 2000; Rush, Veldhuizen, & Adlaf, 2007; Welte, Barnes, Wieczorek, Tidwell, & Hoffman, 2007), participation levels (Currie et al., 2006), and type of gambling (Dickerson, 1993; Fisher, 2000; Livingstone, Woolley, Zazryn, Bakacs, & Shami, 2008; Welte et al., 2007; Young et al., 2008). These 'risk factors' for problem gambling make it clear that an individual's environment plays a substantial role in problem gambling outcomes (Currie et al., 2006; Shaffer, LaBrie, & LaPlante, 2004; Welte, Barnes et al., 2004; Welte et al., 2006). From a geographic perspective, this means that residential location is likely to affect the risk of an individual becoming a problem gambler.

The research literature on this relationship between problem gambling and locality has increased significantly over the past decade. This literature has explored two key aspects of place. First a link has been established between low socioeconomic status and supply of gambling opportunities. Poorer areas tend to be more heavily provisioned with gambling opportunities (Doran, McMillen, & Marshall, 2007; Gilliland & Ross, 2005; Marshall, 1999, 2005; Marshall & Baker, 2001a, 2001b, 2002; Marshall, McMillen, Niemeier, & Doran, 2004; Productivity Commission, 1999; Robitaille & Herjean, 2008; South Australian Centre for Economic Studies, 2005; Wheeler, Rigby, & Huriwai, 2006; Wilson, Gilliland, Ross, Derevensky, & R., 2006). This means that neighborhoods of disadvantage have greater levels of accessibility to gambling outlets, resulting in higher levels of gambling in those areas. Second, problem gambling has been linked to gambling venue accessibility both in Australia (Productivity Commission 1999) and overseas (Campbell & Lester, 1999; Ladouceur, Jacques, Ferland, & Giroux, 1999; Lesieur, 1992; Lester, 1994; Shaffer, Hall, & Bilt, 1999; Sibbitt, 1997; Volberg, 1994). In particular, residential proximity to casinos has been associated with increasing levels of problem gambling (Adams, Sullivan, Horton, Menna, & Guilmette, 2007; Gerstein, Volberg, Murphy, & Toce, 1999; Welte et al., 2007; Welte et al., 2006; Welte, Wieczorek, Barnes, Tidwell, & Hoffman, 2004). In terms of non-casino venues (e.g. electronic gambling machine (EGM) venues), a recent national-scale study conducted in New Zealand linked residential proximity to venues directly with higher levels of problem gambling (Pearce, Mason, Hiscock, & Day, 2008). Therefore, given that gambling supply is linked to disadvantage, and problem gambling is linked to accessibility, there exists a clear logic of effect that connects social geographies to gambling outcomes.

However, while proximity to gaming venues is related to problem gambling, the strength of this relationship is susceptible to contextual variations. For example, a study by Mc Millen and Doran (2006) found no consistent spatial correlation between EGM expenditure and low socioeconomic status at the local geographic scale in three suburbs of Melbourne, Australia. The localized variation in expenditure observed by these authors were explained with reference to size and type of venue, location (i.e., proximity to shopping centres, residential areas or transport corridors, the range of other facilities offered, access to a wide catchment, seasonality, marketing campaigns, opening hours, and local strategies to ameliorate gambling impacts (McMillen & Doran, 2006, p.15). The primary reason for this local-level variation in the relationship between gambling behaviour and residential location is related to mobility. People travel to particular venues outside their local area (Doran et al.,

2007; Marshall et al., 2004; Young & Tyler, 2008). This highlights the central mediating role of spatial mobility in the relationship between localities, gambling opportunities, and problem gambling outcomes. Indeed, the point we wish to emphasise and develop is that the relationship between people, places and problem gambling may be mediated by mobility.

To date, the relationships between mobility, locality and problem gambling have remained largely unexplored in the gambling and problem gambling literatures. Not only is the relationship between mobile local populations and venues poorly understood, the whole area of transient or itinerant populations and their relationships to gambling venues remains untouched. This is a significant omission because physical or 'corporeal' mobility is a defining factor of contemporary social life (Urry, 2002). This mobility is likely to continue not only for obligatory reasons relating to work and family, but because of the continued importance of the social and discretionary motivations for travel (Urry, 2002). To date we have no idea of how various mobile groups may interact with gambling spaces and environments. For example, do mobile groups (e.g. international tourists, visiting-friends and relatives (VFR) tourists, temporary workers) gamble differently to less mobile groups (e.g. local residents) and to each other? Do, for example, their patterns of venue usage differ from local residential populations? From a public health perspective, are different mobile groups more or less vulnerable to problem gambling? If so for what reasons? While these are pressing questions given the proportion and spatial distribution of mobile groups, standard methodological approaches in gambling research, specifically problem gambling prevalence studies, have largely relied on telephone surveys that completely miss mobile populations such as domestic and international tourists, mobile workforces (e.g. miners and construction workers), seasonal workers (e.g. horticulture and tourism workers).

As a first step in addressing this issue the current paper presents an exploratory study of the relationships between mobility, gambling venues, and problem gambling in the context of the Sunshine Coast area of Queensland, Australia. This area is characterised by a well established tourist industry, a number of mobile subpopulations, and a substantial gambling industry. We examine three mobile groups including construction workers, 'grey nomad' tourists, and 'southerner' tourists in the context of their mobility patterns, their usage of gambling venues, their gambling behaviour, and their risk of problem gambling. Using a combination of quantitative and qualitative survey techniques, our purpose is to explore the ways in which these mobile groups use gambling venues in the context of their mobility, and to uncover any discriminating factors between them in terms of their vulnerability to problem gambling. More broadly this research will provide some insights into the relationships between mobility, gambling venues, and gambling outcomes.

Study area

The study region for the project is the Sunshine Coast, an area located approximately 1.5 hours drive north of Brisbane, stretching from Caloundra in the south to Noosaville in the north. Figure 1 below provides a population density surface, created using Kernel Density Estimation (KDE) and the latest release of the ABS Mesh Blocks (ABS, 2008). The highest population densities are centred around Caloundra and Mooloolaba-Maroochydore, with up to 2,500 people per square kilometer in places. Smaller hotspots of densely-populated areas are found north along the coast to Noosaville. The area supports an estimated resident population of approximately 208,000 people (ABS, 2006) and is a nationally-significant tourist destination,

renowned for its wide range of coastal and hinterland attractions including surfing and beach activities, arts and crafts, water parks, the Glasshouse Mountains, and Australia Zoo (an enterprise of the late ‘Crocodile Hunter’ Steve Irwin). A well-established tourism industry caters to both national and international visitors (McGregor Group, 2007). To a large extent, tourism has been the economic backbone of the region. The industry generates 16% of the regions’ Gross Regional Product (GRP) and accounts for over 20% of the fulltime employment (QBR, 2006). Domestic visitors to the Sunshine Coast spent \$1.5 billion in 2004 while international tourists spent \$144 million during the same year (QBR, 2005).

INSERT FIGURE 1

The Sunshine Coast, in part because of its tourism dependence, attracts a number of mobile subgroups, particularly tourists and construction workers. Scoping visits to the area by the lead author as well as discussions with representatives from local councils, business organisations and the Queensland Office of Gaming and Regulation (QOGR) revealed that itinerant elderly tourists, or “grey nomads”, comprised a significant component of tourists visiting the area. These mobile retirees dominate the tourist population in regional Queensland and have longer stay durations than other visitors (Stoeckl et al., 2006). The scoping visits also revealed that itinerant construction workers were an important sub-population on the Sunshine Coast, reflecting the temporary and cyclical nature of employment in this industry (Thomas et al., 2001) as well as the employment opportunities that have arisen from large-scale infrastructure projects. For example, the Queensland Government estimates that spending on infrastructure in the southeast portion of the state between 2006 and 2026 will reach \$124 billion (Queensland Government, 2009).

Gambling venues on the Sunshine Coast

Table 1 presents number of EGM venues by Local Government Area (LGA). The area is well provisioned with clubs and pubs, with 115 EGM venues in 2008, consisting of 66 clubs and 49 hotels. Maroochydore hosts the greatest number of venues (i.e. 48), with fewer distributed in each of the other LGAs (i.e. between 19-28). Clubs tend to be larger, suburban, and more family-oriented venues (Young et al., 2009) with a maximum allowable cap of 280 EGMs in Queensland. Pubs on the other hand are smaller, explicitly private sector enterprises that are restricted to 40 (Office of the Queensland Parliamentary Counsel, 2009).

INSERT TABLE 1

Method

Many studies define itinerancy on the basis of the duration, frequency and seasonality of visits by mobile sub-groups to locations outside their typical place of residence (e.g. Bell & Ward, 1998; Iachan & Dennis, 1993; Forrest, et al., 2009). Smith (1989) points out, that while there are numerous ways to define temporary residency, there is no single “correct” measure. Rather, it is more important for the researcher to define an approach that is relevant to the project or issue under consideration (e.g. Stoeckl, et al., 2006). Given the exploratory nature of this project, and our focus on potential links between gambling behaviour, social isolation, and mobility, we have used a self-defined definition of itinerancy, specifically whether or not survey respondents

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3 viewed themselves as permanent residents of the Sunshine Coast. We chose this
4 definition as the scoping visits made clear that people can live in a location for some
5 years without feeling a sense of belonging.
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8 **Data collection approach**

9 Our data collection approach was based upon a quantitative face-to-face survey of
10 grey nomads and construction workers combined with a series of follow-up semi-
11 structured interviews to contextualise and elaborate on the empirical results. The face-
12 to-face survey had several key aims:
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- 14 • To confirm that the participants viewed themselves as temporary residents.
15 Once this had been established, respondents were asked a number of questions
16 about the nature and length of their temporary residency.
17
- 18 • To collect information about socio-demographics, problem gambling (i.e. the
19 Canadian Problem Gambling Index (CPGI), gambling participation, and the
20 use of gambling support services. To do this we replicated key questions from
21 the Queensland Gambling Household Survey (Queensland Government, 2008)
22 but modified the help-seeking questions from “*In the last 12 months...*”, to
23 “*Since being on the Sunshine Coast...*” because many of the respondents had
24 lived in the study region for less than 12 months.
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- 26 • To ask a series of questions about the usage of club and hotel facilities by the
27 three groups. Several of these questions were sourced from the study
28 conducted by Marshall, McMillen, Niemeier, & Doran (2004) that focused on
29 local-level venue usage.
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32 Given the logistical constraints of interviewing grey nomads and construction workers
33 at caravan parks and construction sites, the length of the survey was limited to 30
34 minutes.
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36 The follow-up interviews adopted a semi-structured format where respondents
37 were asked to discuss a range of topics in relation to their EGM venue usage,
38 gambling behaviour and mobility. These interviews lasted for between 30 minutes and
39 two hours depending upon the range and detail of the discussion. This qualitative
40 stage was also used to inform and, where necessary, modify the data collection
41 techniques (e.g. Stoeckl, et al., 2006). For example, during the initial interviews with
42 retirees, many of the respondents stressed a perceived difference between
43 “southerner” grey nomads and “true” grey nomads. Southerners were identified as
44 temporary residents who visited for several months to escape the southern winter
45 compared with the true grey nomads who were permanently mobile and did not have
46 a home base. Further discussions with local government and industry representatives
47 made it clear that the southerner grey nomads were a distinct group of itinerant
48 tourists who visited the Sunshine Coast during the winter months. We subsequently
49 conducted a second round of face-to-face surveys and qualitative follow-up interviews
50 during winter to survey southerners.
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54 **Recruitment of target groups**

55 Recruitment of target groups was conducted in two stages. The first stage involved
56 recruitment for the face-to-face surveys while the second focused on recruitment for
57 the qualitative follow up interviews. For stage one, grey nomads and southerners were
58 sourced through caravan parks in the study area. The site managers or owners of the
59 caravan parks were first approached and briefed on the project. If they confirmed that
60 grey nomads and southerners frequented the park, permission was requested to

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conduct surveys. The majority of caravan park owners were supportive of the project. Surveys were generally conducted between 10am-12pm in the morning and 1:30pm-5pm in the evening to avoid interrupting participants during lunchtimes. Some “snowballing” (where participants recommend other potential participants) took place which made it possible to take advantage of established social networks. For the second stage qualitative interviews, a number of respondents from each sub-group were recruited during the face-to-face survey.

Construction workers were recruited by contacting construction site managers and briefing them on the nature and scope of the project. Permission was sought to interview on-site and during scheduled breaks (e.g. “smoko” and lunch breaks). Often this meant that a relatively limited number of surveys could be completed at each site per day. However, most sites were visited several times to maximise the number of potential participants. No incentives were offered either to grey nomads or southerners because participation rates for these sub-groups were relatively high. However, it became evident during the initial scoping process that if an appropriate incentive was offered to construction workers, the response rate amongst this group would improve significantly. Following additional ethics approval, participants were offered a \$25 fuel voucher, which proved effective. Again, participants for the qualitative interviews were recruited during the first stage survey.

All data collection for the study was conducted between February and September, 2008. The final number of participants surveyed for each of the subgroups was as follows - grey nomads (n = 64); southerners (n = 28) and construction workers (n = 68). Qualitative follow-up interviews were conducted with 10 grey nomads and southerners and 5 construction workers.

Data analysis

Analyses were conducted using Microsoft Excel and S-Plus 7.0. Frequencies were calculated based on the number of valid responses by the different subgroups. To identify the characteristics of problem gambling sub-groups, a decision tree analysis of the interactions between a number of independent variables and CPGI scores was conducted. The qualitative interviews were used to assist in the interpretation of the empirical findings.

Results

Length of temporary residence and place of principal residence

The groups varied considerably in terms of residential duration on the Sunshine Coast. Nearly all grey nomads (97%) had lived in the area for less than six months, with a little under half of these (45%) resident for less than three months. The southerners had all lived in the study area for 3 to 6 months. In contrast, the construction workers displayed a more even distribution over a longer time period, with only 10% resident for less than 6 months, 15% for less than a year, 22% from one to two years, 9% for less than three years, 13% for less than five years, and 31% for more than 5 years.

The principal place of residence (i.e. where respondents lived when not temporary resident on the Sunshine Coast) was virtually identical for the grey nomads and the construction workers, with over two-thirds from other parts of Queensland. The remainder (12% in both cases) principally resided in New South Wales with a scattering from the remaining jurisdictions. The southerners, on the other hand,

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3 principally resided in Victoria (36%), New South Wales (29%), and New Zealand
4 (14%), with less than 10% from the other Australian jurisdictions.
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7 **Socio-demographics**

8 Table 2 displays the key socio-demographic characteristics of each of the subgroups.
9 The sample exhibited a gender bias with the percentage of males comprising 57%,
10 64%, and 93% of grey nomads, southerners, and construction workers respectively.
11 Both the grey nomads and the southerners were generally of retirement age, with
12 mean ages of 63 and 67 years respectively. The construction workers, in contrast,
13 were much younger (mean age of 35). The level of education was generally similar
14 between the grey nomads and southerners. Almost half of the grey nomads (47%) and
15 southerners (49%) had completed some high school, around 25% for both groups had
16 completed a trade or technical qualification, while more grey nomads had completed
17 some university training (21% cf. 4%). Construction workers were more likely to
18 have completed a trade or technical qualification (38%) than the other two groups.
19 The contrast in employment was stark and largely self-evident, with the majority of
20 grey nomads (74%) and southerners (96%) being retired, and the majority of
21 construction workers employed full-time (81%). The majority (89%) of grey nomads,
22 and all southerners, were married. In comparison, 39% of construction workers were
23 married, 19% were in a de facto relationship, while the remainder were never married,
24 divorced or separated. Mean personal pre-tax income amongst grey nomads and
25 southerners was similar, AUD 36,116 and AUD 31,526. Construction workers had a
26 higher level of personal pre-tax income with a mean of AUD 46,373.
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34 **Venue usage**

35 Construction workers tended to frequent a greater number of venues than the other
36 two groups, with 45% playing EGMs at more than 3 venues. The comparison
37 proportions for grey nomad and southerners were 8.3% and zero respectively. Grey
38 nomads and southerners displayed a strong preference for clubs with all respondents
39 in these groups choosing a club as their most frequently visited venue. For
40 construction workers, the most frequent venue was split between clubs (58%) and
41 pubs (42%).
42

43 To dig deeper into this finding, respondents were asked to rank the importance
44 to them of various venue facilities on a scale of 1 to 10 (with 1 being not very
45 important and 10 being very important). This output is reported as a popularity ratio,
46 rather than a frequency (see Figure 2 below). The ratio was calculated by summing
47 the scores for each facility, then dividing by the total number of respondents in each.
48 The purchase of meals was by far the most popular/important facility amongst grey
49 nomads and southerners, followed by socialising with friends. The popularity ratio
50 distribution for construction workers was much more even, suggesting they engage
51 with venues more comprehensively than the other groups.
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58 **Gambling participation**

59 In the 12 months preceding the survey, 85% of construction workers, 84% of grey
60 nomads, and 68% of southerners engaged in some form of gambling. The construction
workers gambled on a greater range of activities than the other two groups (Figure 3).

Construction workers gambled most heavily on EGMs (70%), keno (57%), lottery products (49%), horse or grey hound races (42%), and sportsbetting (33%) respectively. Their participation in casino table games (19%), internet gambling (12%) was less frequent. Grey nomads were most likely of the three groups to purchase lottery tickets (81%) as well as Art Union tickets (36%). They also played EGMs (39%) and keno (20%) at similar levels to the southerners. The southerners were most likely of the three groups not to gamble (32%), and when they did gamble preferred lotteries (46%) and EGMs (32%).

INSERT FIGURE 3

Problem gambling outcomes

A decision tree analysis was conducted to investigate the relationship between CPGI scores and the following independent variables:

- *Marital status*
- *Age*
- *Number of venues visited by respondent to play EGMs*
- *Income*
- *Length of temporary residency*

Several other variables were initially included in the model, but were subsequently removed due to their lack of explanatory power. These included *type of temporary resident* (i.e. grey nomad, southerner or construction worker), *preferred venue type* (i.e. *pub or club*) and *employment status* (casual, part time, full time or retired). The final output for the decision tree contained 9 terminal nodes, with a minimum size of 5 observations. In order to more clearly visualise the interactions associated with subgroups generated during the analysis (e.g. Silver and Hurwitz, 1997), Figure 4 displays the rules associated with each subgroup (x-axis) displayed against the CPGI (y-axis). Eight subgroups (labelled A-H in Figure 4) were identified in relation to their problem gambling risk using the CPGI categories of problem gambling, moderate-risk gambling and non-gambling/recreational gambling.

Only one subgroup (group A) fell within the problem gambling range with a mean CPGI score of 9.6 (n=5). People in this subgroup were either divorced or had never been married, had been temporary residents for between three months and three years, and visited up to five venues per month to play EGMs. A cross-check revealed that all respondents within this subgroup were construction workers.

Three subgroups (groups B, C and D) fell within the moderate risk gambling range. Subgroup B had a mean CPGI score of 6.0 (n=5). Respondents in this subgroup had the same characteristics as the problem gambling subgroups but were in a defacto relationship. A cross-check revealed that all respondents within this subgroup were also construction workers. Subgroup C had a mean CPGI score of 4.3 (n=9) and included people who had been temporary residents for between three months and three years, were either divorced, had never been married or were in defacto relationships, and visited less than three venues per month to play EGMs. Subgroup D had a mean CPGI score of 3.2 (n=5) and included people who were married or separated but not divorced, were younger than 49 years of age, and visited more than two venues to play EGMs.

Four subgroups (groups E, F, G and H) fell within the non-gambling/recreational gambling range. These subgroups were generally people who were married or separated (but not divorced) and gambled at less than two venues.

The subgroup in this range with the highest mean CPGI score of (i.e. subgroup H, (n=6), CPGI score 1.8), had longer residency times in the area in the area and visited more than 5 venues to gamble.

INSERT FIGURE 4

Findings from qualitative follow-up interviews

It is clear that the Sunshine Coast is heavily provisioned with gambling venues. However the quantitative results revealed that mobile groups we examined used these venues in very different ways. In order to explore these patterns in more detail as well as the potential links between mobility and gambling behaviour, the discussion below is presented in conjunction with findings from the qualitative follow-up interviews.

Southerners and grey nomads were less likely to visit venues, did so for more specific reasons (i.e. to purchase meals), and gambled much less than the construction workers. In the qualitative interviews, the tourist groups frequently mentioned venues in the broader contexts of travel costs, recreational patterns and interactions with their spouse. As the following quotations suggests, the tourist groups were interested in venues in a functional context rather than a social or gambling-related one:

“In this area, there is so much to do here; you don’t have to spend your time playing pokies. Less mobile people in units would tend to go to venues more [for] meals and maybe gambling. Permanent [residents] tend to be blasé; people who live here but don’t explore the area as much” (Ross and Margret, grey nomads)

“When we do play the pokies, its while waiting for dinner....[we] go for meals and when we’re there, we put \$20 in the machines.... \$20 is the limit” (Gary, grey nomad)

“Jim usually sits outside bored” (Lorraine, grey nomad, aware of that her husband often waiting for her to finish playing the pokies)

“They are the most antisocial structures. [My] wife goes and I’m left alone, standing, watching her push buttons” (Colin, grey nomad, expressing his disapproval of his wife playing the pokies when they visit a club).

“On the road [We] use clubs more for meals – we don’t gamble as much if on the road. Because of the costs on the road [my] wife disapproves of [me] gambling” (Terry, grey nomad)

“I used to play the pokies....seven of us would put \$5 and [as a group] put it all in one poker machine” (Robin, southerner, commenting on playing pokies with a group of friends, rather than as an individual)

It became clear that the grey nomads and southerners were primarily interested in the cheap meals on offer, and resisted any further engagement with the venues, as made clear in the following quotations:

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“*[I] do all the cooking at home [i.e. the caravan] to save money. [It is] a special thing to go out for a meal*” (Colin, grey nomad)

“*[For] some people, they eat at least once a day at clubs... [if we go] it is the main meal of the day*” (Jim and Lorraine, grey nomads)

“*It tastes alright to me – I didn’t have to cook it!*” (Margret, grey nomad, commenting on the quality of meals at clubs in relation to the relatively low prices)

“*[It is] wholesome food, good value for money but not exquisite. We go more so we don’t have to cook or wash up*” (Gary, grey nomad)

Construction workers presented a stark contrast. This group visited more venues than the other groups, engaged with a greater range of venue facilities, and gambled more heavily. Indeed, venues played an important role in the pattern of construction workers engagement with place. During the qualitative interviews, respondents frequently identified pubs as the first port of call for work and entertainment when moving to a new place as described in the quotes below:

“*A lot of contractors are fully set up so they can chase the work, a lot of investment in gear. You can sit down and have a beer and within hours you’ve got work, people coming up to you*” (Jason, talking about how he and many of his workmates use pubs as reference points to get known and find work when travelling inland or further up the coast).

“*When we are away [travelling for work] we normally stay in pubs. Some [of my workmates] use the pokies, most drink*” (Ra, talking about how he and workmates stay at pubs when working inland).

“*I go with people I’m working with. I don’t generally go there by myself and love it*” (Ben, emphasizing how he goes to pubs largely with workmates).

The follow-up interviews also made it clear that construction workers tended to gamble when they felt isolated or when there were few alternative forms of entertainment. Indeed, respondents emphasized the central social role that pubs played in their lives:

“*On the weekends I go fishing. If it’s raining what do you do? ...[I] go gambling.. [there is] really no other entertainment. I go mostly on the weekends...[I am] too busy on weekdays*” (Sean, talking about his propensity to play the pokies on the weekends when he feels there are no other social alternatives if he can’t go fishing).

“*If you’re in a strange town and if it’s not viable to travel home...[you have] a few beers [and put] 50 bucks in the pokies*”

(Jason, talking about when he has been travelling with work and away from his family)

“Friday arvo, everyone hangs out for Friday – to have a beer, play the pokies... guys tend to go from the site to the pub” (Jason, again speaking about an informal but regular gathering of workmates from the site he was working at).

“You make friends on site, there are always some idiots but some good guys...[we] use the facilities of pubs a few times a week” (Ben, talking about socialising when moving regularly up the coastline with work).

Discussion

The construction workers depend on venues in order to find work, to orientate to the local area, and to socialise. These men were also more likely to have a longer residential duration in the region, which increased their gambling exposure over time. EGM venues are thus indispensable to this group both socially and economically, yet evidently pose a serious health risk. This dependence appears to be reflected in problem gambling outcomes. Problem and other risky gambling was identified entirely within the sample of construction workers.

The decision tree analysis made clear that relationship status, residency, and venue usage were all implicated in problem gambling outcomes. Of these factors, it was personal relationships that appeared to play the strongest discriminating role between problem gamblers and their less risky counterparts. Specifically, being involved in a *de facto* relationship meant the difference between a non-problem and problem gambler for construction workers in the highest risk categories.

The grey nomads and southerners were at little to no risk of problem gambling. These retirees are certainly mobile - indeed the grey nomads are far more mobile than the construction workers. However, this mobility does not translate into social isolation as it does for the construction workers. The tourists are engaged in more stable and richer social contexts, and are more socially connected. The reliance of construction workers on venues as suggests that those groups with more social capital (grey nomads and southerners) are protected from problem gambling to a greater degree. It is this social connectedness that clearly mediated the relationship between mobility, EGM venues and problem gambling.

For particular subgroups in the population, mobility *per se* does not directly result in higher risk of problem gambling, nor does the local supply of gambling opportunities. These variables are mediated by the social connectedness of the group in question. In particular, it appears the social capital of each group is a significant mediator. Urry (2002) has argued that given social inclusion requires ‘intermittent co-presence’ with other individual or groups in an increasingly far-flung and internationalised network, different forms of mobility are related to different degrees of social capital. Thus, mobility is essential to an inclusionary society that is rich in social capital. In the words of Urry (2002, 270):

“A socially inclusive society would elaborate and extend the possibilities of co-presence to all members. Significant inequalities with regard to access to such co-presence constitute undesirable social exclusion. A good society would

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3 minimize 'coerced immobility' (as well as the many forms of 'coerced
4 mobility') and maximize the conditions for co-presence".
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7 This is an important observation in the current context. It appears that the mobility of
8 the grey nomad and southerners is discretionary, focussed around leisure, freedom, and
9 enjoyment of places with high environmental amenity (i.e. the warm winters of the
10 Sunshine Coast). In this case mobility is liberating rather than burdensome. Social
11 contexts are maintained and even fostered through this sort of mobility. In contrast,
12 the mobility of the construction workers is related to the economic imperatives of
13 finding work, invariably located away from homes and core family social networks.
14 Construction workers are socially isolated outside of their peer group – the sort of
15 'coerced mobility' that Urry referred to. In these cases, EGM venues become both a
16 crucial link to the local community, but one that exposes these workers to high
17 degrees of risky gambling. Indeed, a study in the US by Griswold and Nichols (2006)
18 found that gambling venues, in this case casinos, located within 15 miles of a
19 community significantly reduced social capital across the 300 metropolitan areas
20 examined. In addition, EGM venues pose the more general health risks associated
21 with a sedentary environment combined with alcohol availability. And this is in the
22 Sunshine Coast environment that is rich in recreational opportunities. There are far
23 fewer viable alternatives in most of the other regions of Australia with significant
24 mobile workforces which suggests this issue may be even more serious.
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29 **Conclusion**

30 An exploration of the EGM venue visitation patterns of three mobile sub-populations
31 on the Sunshine Coast revealed clear differences. While technically all 'itinerant'
32 according to our definition, the three groups displayed not only socio-demographic
33 differences, but also substantial differences in venue visitation, gambling behaviour
34 and problem gambling risk. The relationship between gambling availability and
35 problem gambling was heavily mediated by social circumstances and connectedness.
36 The group with the least discretionary mobility, the construction workers, were most
37 heavily dependent on gambling venues for economic and social relationships. This
38 dependence translated into higher levels of problem gambling risk, which was further
39 mediated by the inter-personal connectedness of individuals. These suggest that social
40 capital may play a protective role in a gambling context and this finding is worthy of
41 further investigation. More generally, these results highlight the need to identify and
42 explore other subgroups in Queensland such as itinerant miners and
43 seasonal/temporary tourism workers as well as mobile populations elsewhere. Such
44 investigations may uncover variations in vulnerability between groups that are in the
45 main excluded from conventional gambling and problem gambling prevalence
46 surveys. In terms of harm minimisation, regulators would be well advised to carefully
47 consider mobile populations in their licensing decisions. In the private sector,
48 initiatives by construction companies that create social networking opportunities
49 outside of pubs and clubs warrant consideration.
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59 **Acknowledgements**

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3 This research was funded by the Queensland Government’s Responsible Gambling
4 Research Grants Program - Office of Regulatory Policy - Department of Employment,
5 Economic Development and Innovation. The authors would also like to thank
6 Community Solutions and Mr Howard Hollow for conducting the majority of the
7 quantitative interviews.
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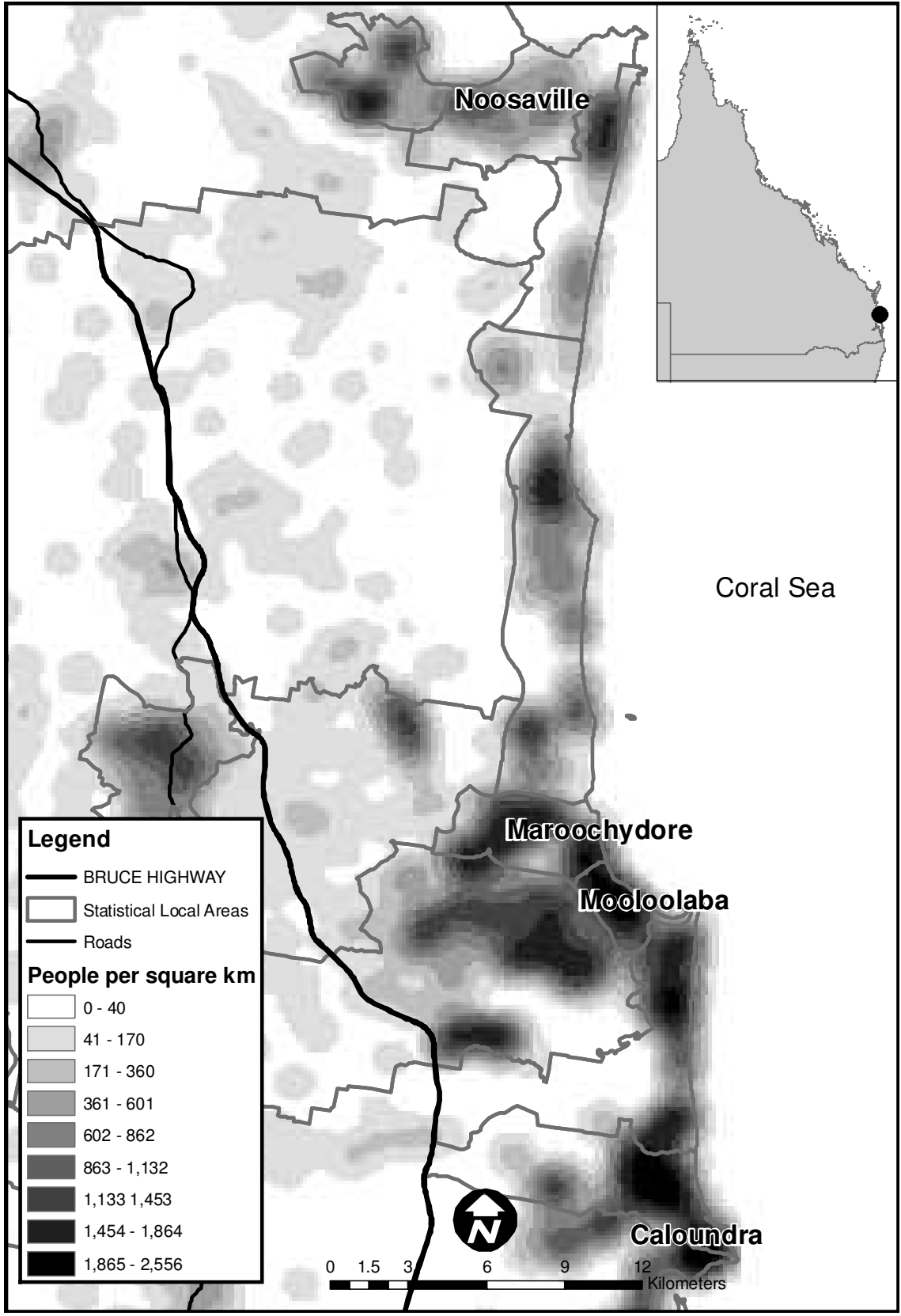


Figure 1. Population density surface for the Sunshine Coast

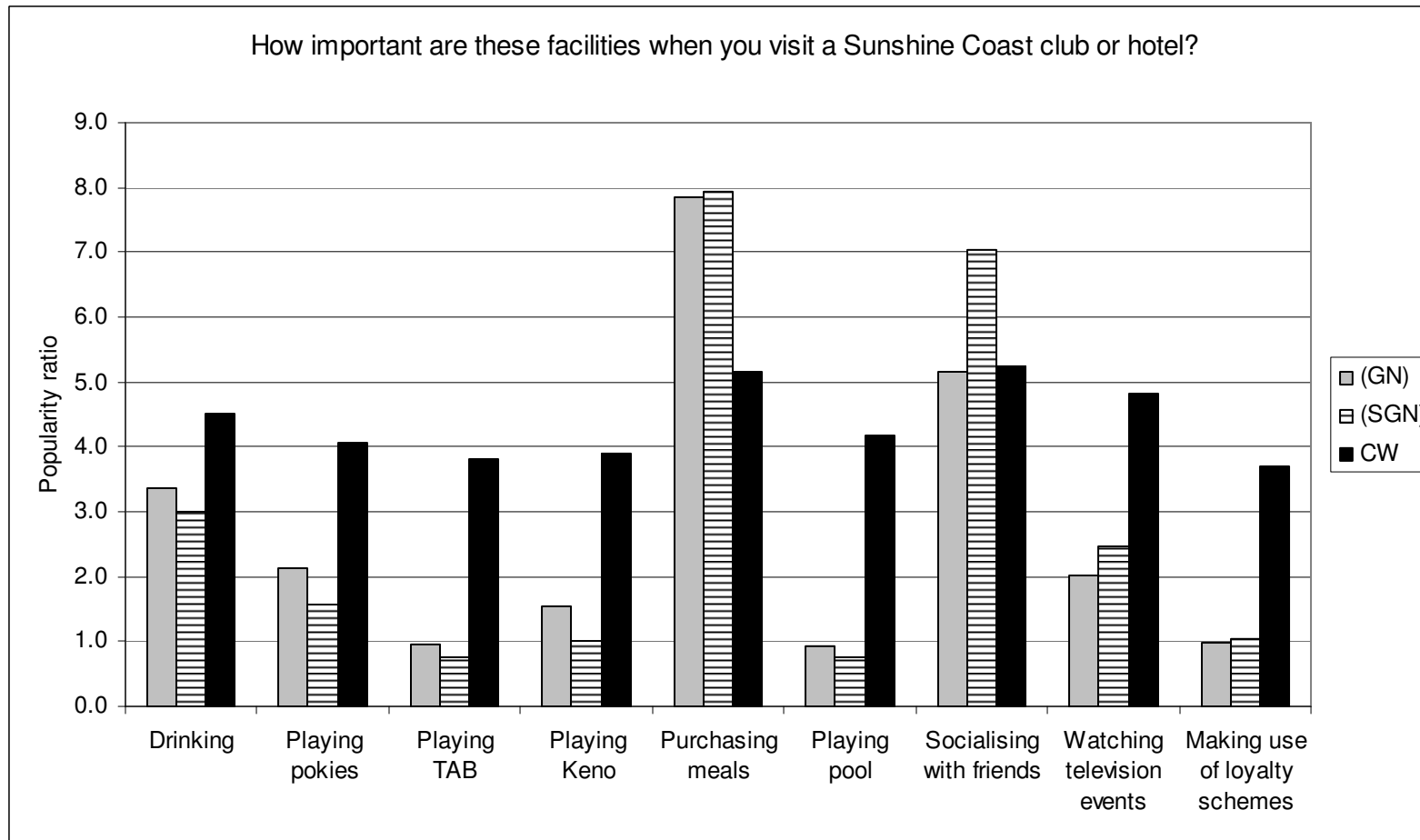


Figure 2. Importance of different facilities when visiting a club or hotel

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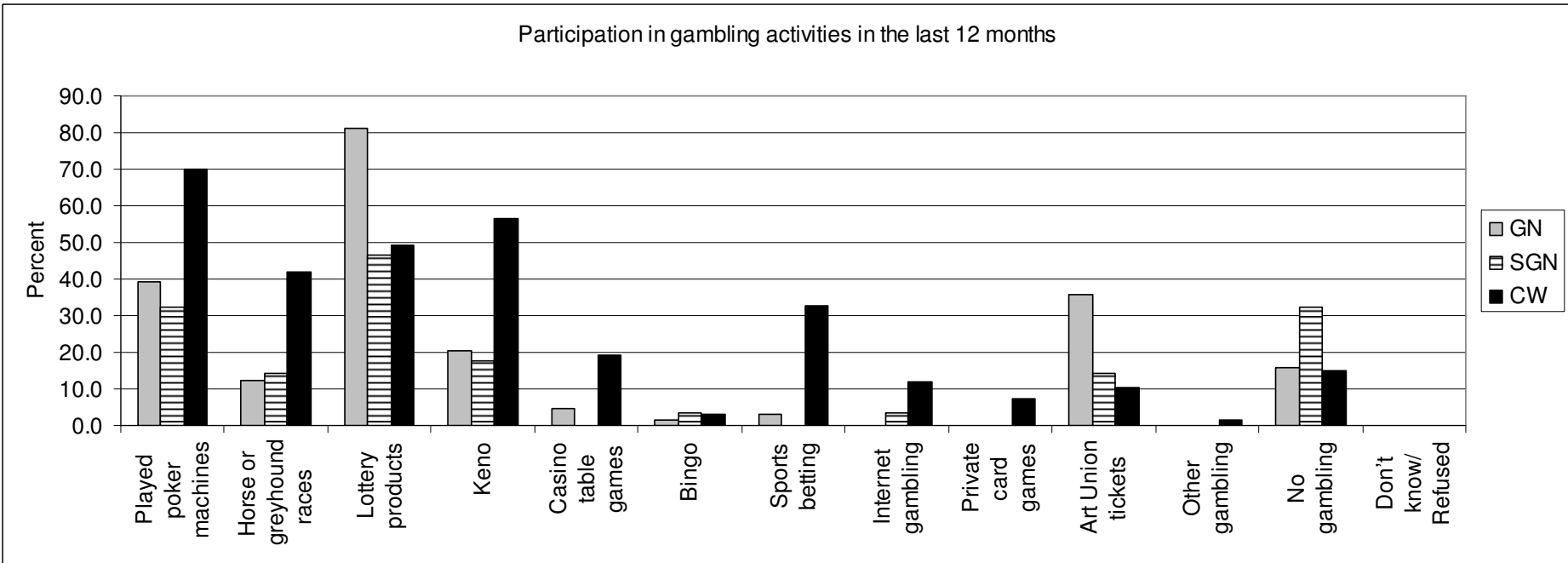


Figure 3. Participation in gambling activities in the last 12 months

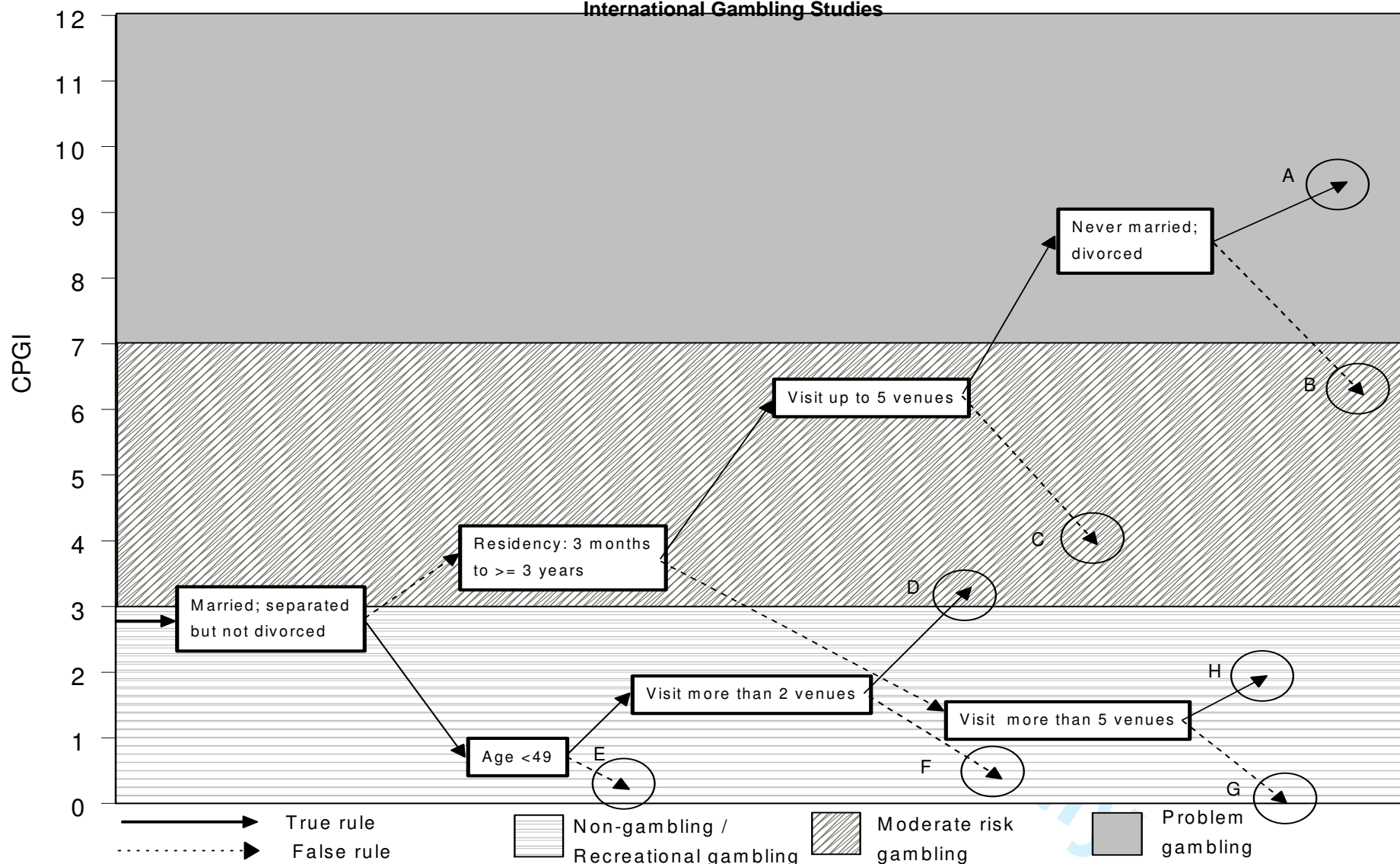


Figure 4. The rules associated with each subgroup displayed against the CPGI on the Y-axis

<i>LGA</i>	<i>Clubs</i>	<i>Pubs</i>
<i>Caloundra</i>	19	9
<i>Maroochydore</i>	26	22
<i>Noosa</i>	14	6
<i>Cooloola</i>	7	12
<i>Total</i>	66	49

Data source: Office of Regulatory Policy

Table 1. Clubs and hotels in the key LGAs on the Sunshine Coast 2009.

	<i>Grey Nomads</i>	<i>Southerners</i>	<i>Construction Workers</i>
<i>Number of respondents</i>	64	28	68
<i>Sex (%)</i>			
Male	64.1	57.1	92.6
Female	35.9	42.9	7.4
<i>Age (mean)</i>	63.1	67.0	34.7
<i>Education (%)</i>			
Post graduate	4.7	0.0	1.4
University or college	15.6	3.6	7.2
Trade, technical certificate or diploma	26.6	25.0	37.7
Year 12	15.6	17.9	24.6
Year 10	31.3	35.7	24.6
primary	6.3	7.1	1.4
Did not complete primary school	0.0	10.7	0.0
	0.0	0.0	0.0
<i>Employment status (%)</i>			
Work full-time	9.4	0.0	81.2
Work part-time	4.7	3.6	2.9
Work on a casual basis	4.7	0.0	5.8
Self-employed	3.1	0.0	10.1
Full-time student	0.0	0.0	0.0
Full-time home duties	3.1	0.0	0.0
Retired	73.4	96.4	0.0
Sick or disability pension	1.6	0.0	0.0
<i>Marital status (%)</i>			
Never married	0.0	0.0	27.5
Married	89.1	100.0	39.1
'live-in' relationship (de facto)	3.1	0.0	18.8
Separated but not divorced	1.6	0.0	4.3
Divorced	3.1	0.0	8.7
Widowed	3.1	0.0	0.0
Refused	0.0	0.0	1.4
<i>Income before tax (mean)</i>	\$36,115.6	\$31,525.6	\$46,372.8

Table 2. Key socio-demographic characteristics of each of the subgroups